'L.U.N.C.'
Commerce R. R.

What do spinners think of cotton grown in irrigated fields? This timely subject is dealt with fully in an article starting on Page 70 of this issue.

JUL 28 1950

VOL. 76 NO. 2

# textile bulletin

JULY • 1950

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Manufactured by
JACOBS
CHECK STRAPS
Reinforced "Verybest"
Provides 12½% more wearing surface, conformed to Picker Stick angle.
"Verybest" Conventional
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HAIRY SPINDLE BUMPER STRAPS
FLAT STRAPS
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Hairy and Oak Leather or Rubberized Fabric.
NEW STRAP DEPARTMENT IN CHARLOTTE—Strapping in all styles and sizes now expertly made in Charlotte as well as Danielson, insuring fast service and cheaper delivery to Southern mills. Immediate delivery from closest point.
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The Bullard Clark Company
E. H. JACOBS
NORTHERN Division Danielson, Conn.

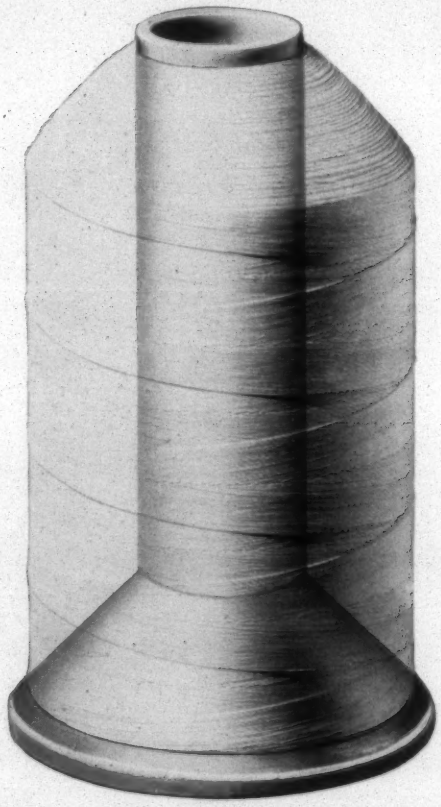
SERVING THE TEXTILE INDUSTRY SINCE 1899

# SONOCO

## SINGLE HEAD SPOOLS

*An Original Sonoco Development*

FOR PACKAGING INDUSTRIAL THREAD



Standard with the industry for packaging industrial thread, the SONOCO Single Head Spool features a tapered base that permits the wound package to deliver freely to the sewing machine. It is made in a variety of base diameters and barrel lengths and with colored lacquer tips for identification. Special scoring and surfaces are available to prevent slippage of thread under unusual conditions.

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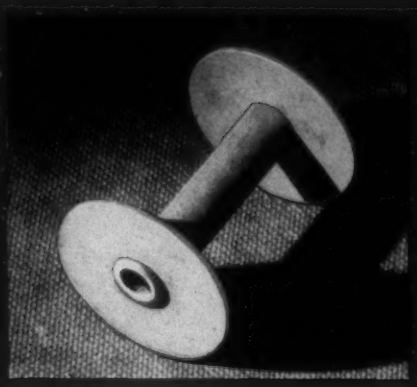
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## SONOCO PRODUCTS COMPANY

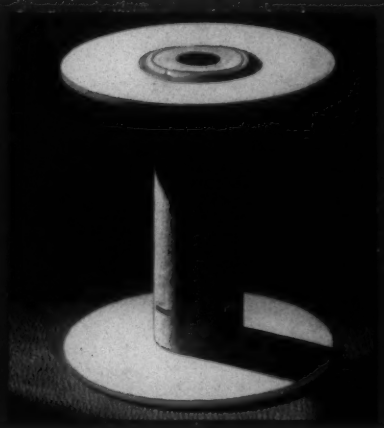
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**DEPENDABLE SOURCE OF SUPPLY**

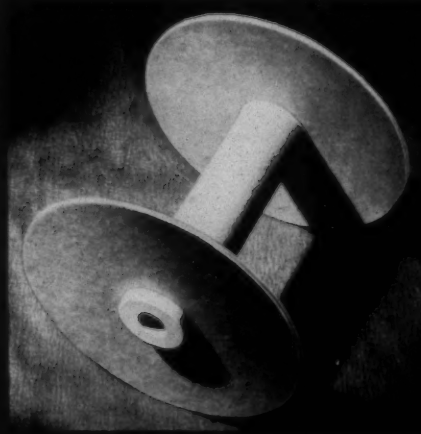
**SONOCO .... makes spools to serve a variety of purposes. Shown below are:**



**BIAS**—FOR WINDING LIGHT PACKAGES OF BIAS BINDING AND NARROW TAPE. CRIMPED END CONSTRUCTION.



**F. F. M.**—FOR WINDING BRAID, TAPE AND CORD. FEATURES METAL REINFORCED BUSHING.



**R. F.**—FOR WINDING BRAID, TAPE AND CORD. MADE WITH TREATED FIBRE HEADS AND WOOD BUSHINGS.




# DRAPER'S NEW #1 Spinning Frame Builder Motion

## REDUCES DOFFING AND BATTERY HAND COSTS

THE #1 Spinning Frame Builder Motion is an automatic builder motion that removes the necessity of constant attention to the frames. It builds a perfect feeler bunch of the desired yardage and width, eliminating the possibility of having several turns put on the step above the bunch and thereby causing the Midget Feeler to operate improperly.

The position of the filling package with respect to the feeler bunch is controlled exactly. The package can be built to any desired diameter and taper.

*Uniform bobbins of uniform yardage* are possible as the height of the build on each set of bobbins can be accurately predetermined. It is difficult for doffers to "short doff" a frame.

A tip bunch can be put on in various sizes or eliminated entirely. This bunch speeds up the work of battery hands by as much as 30% as they do not have to look for the ends.

The ring rail is automatically lowered and locked in the doffing position as the frame knocks off. The bobbins are then ready to be doffed with or without slackening the ends, according to mill practice.

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Investigate this builder motion to cut your spinning costs.

**DRAPER CORPORATION**

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**High Speed**
**Ball Bearing**
**Drawing Equipment***



# Doubles Production

Actual tests in many leading mills, under ordinary working conditions, show that Ideal Drawing Equipment delivers an average of twice the amount of roving possible on ordinary frames. These astonishing records are due to Ideal's new and greatly improved design which makes possible far higher speeds and uninterrupted production.

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All Ideal friction contacts are ball bearing and permanently lubricated. Spacing sections transmit no resistance and are independent of the rolls. All units are always in perfect alignment and are automatically synchronized. Back-lash is impossible. These factors permit far higher speeds than are possible on ordinary roving equipment.

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For the smoothest and fastest running high quality drawing you've ever seen, get the facts on Ideal High Speed Drawing Equipment today. Sold on a "you-must-be-satisfied" basis.

*Patented

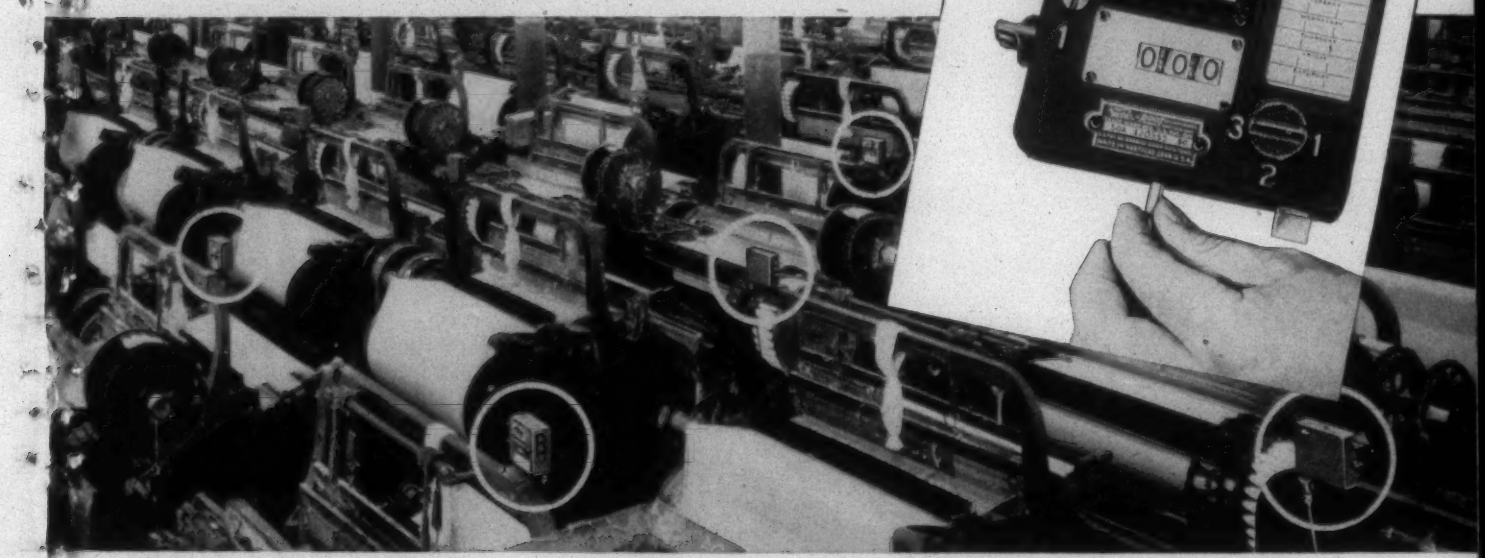
**Ideal**
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**Bessemer City, N. C.**

# Why Mills Get More out of Looms that give them

# Direct "Veeder-Readings"

## . . . with 2-3 Convertible Pick Counters

Veeder-Root 2-3 Pick Counters are easier to install . . . to read . . . to reset (no pull-out required) . . . to lubricate . . . and to convert from 2 to 3-shift operation, which can be done right in the mill. Also, convenient production-card on every counter enables overseers to tell instantly whether any loom is lagging. And the new *locked counting wheel* stubbornly resists overthrowing. These vantage-points of modern Veeder-Root 2-3 Pick Counters are *your* check-list of pick-counter value. *So check now,* and see how much more you can get out of your weave-room with modern V-R Pick Counters.

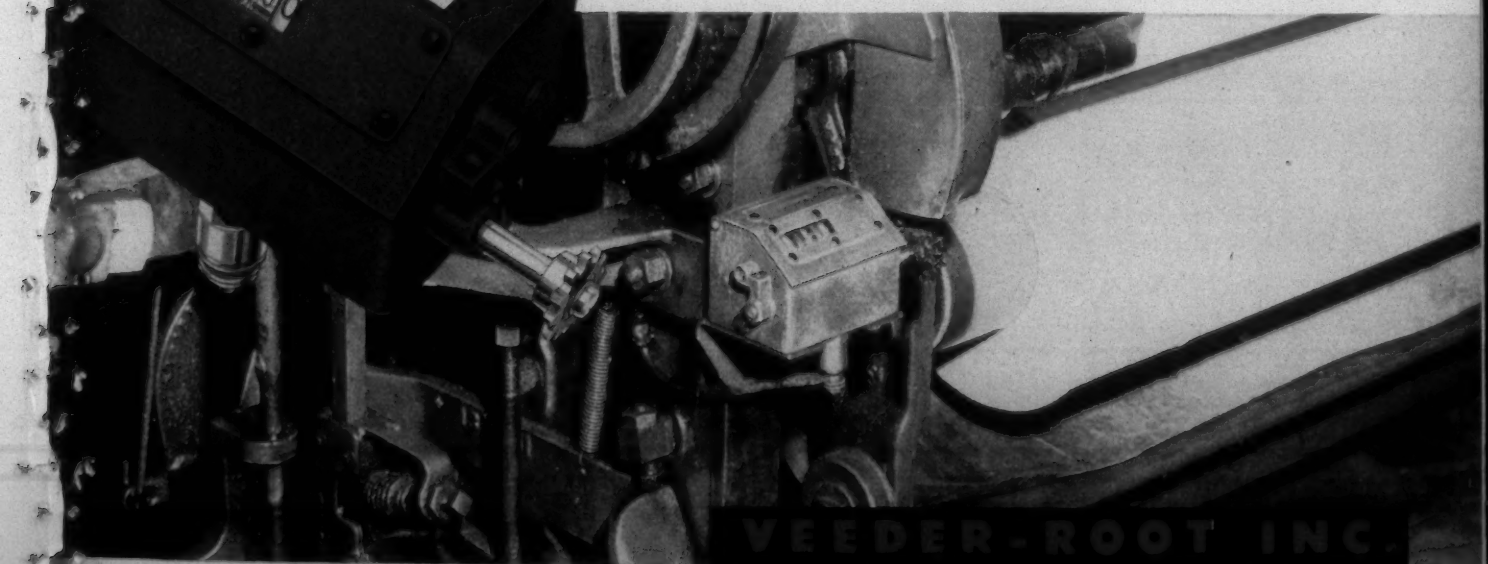


## . . . and with New Loom CUT METERS




Mills report Cut Meters cut costs and increase output in many different ways by assuring uniform cuts and enabling weavers to concentrate on loom-operation . . . by lessening the need for supervision . . . by reducing waste by doffing at bad spots and resetting for proper length . . . by making it easy to change cut lengths at will . . . by providing quick inventory of yardage on the looms . . . and by reducing customer complaints.

Put all your looms under complete *Count*rol with Veeder-Root 2-3 Pick Counters and Cut Meters. Get in touch with the nearest Veeder-Root office.

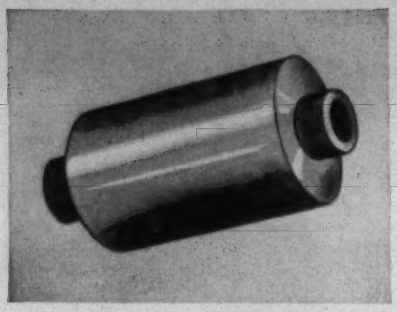


VEEDER-ROOT INC.

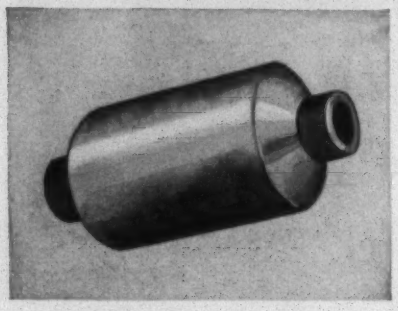
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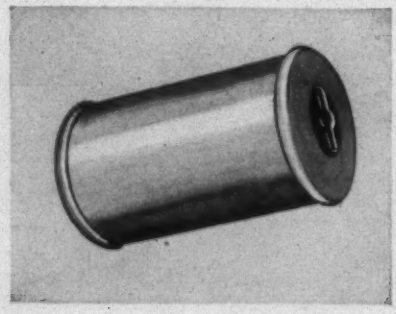
*In Canada:* Veeder-Root of Canada, Ltd., 955 St. James St., Montreal 3.



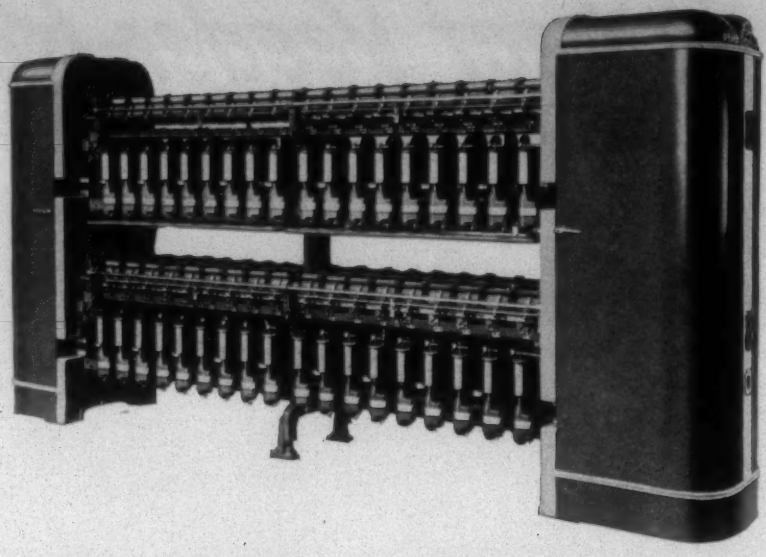
**PERFECT PARALLEL CHEESES**



**(tapered ends if desired) OR**



**DOUBLE FLANGED BOBBINS WOUND on the PLATT MU-1**



# PLATT'S NEW MU-1

## Light Package UPTWISTER

U. S. AND OTHER PATENTS APPLIED FOR

HERE is a brand new uptwister, simplified for easier maintenance, streamlined for higher speeds. The new Platt MU 1 Uptwister, for cheeses or double flanged bobbins, has the design rigidity that allows you to safely push production and the beautiful machining of moving parts that permits these continual high speeds. The patented, flexibly-mounted, roller bearing spindles with swivel-mounted toggle and patented automatic quick brake, allows speeds up to 15,000 r.p.m. with utmost stability and low power consumption. The Platt MU 1 is a double deck machine, each tier driven by separate motors. The top tier being narrower than the bottom, allows an unrestricted view of all packages. Every vital part is automatically lubricated, from traverse gears to twisting gears. Would you like a twenty-page, full color booklet with seven pages of cut-away illustrations of this radically new twister? Write Atkinson, Haserick & Co. in Boston.

### *FEATURES*

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**PLATT BROS.**

*(Sales) Ltd. • Oldham, England*

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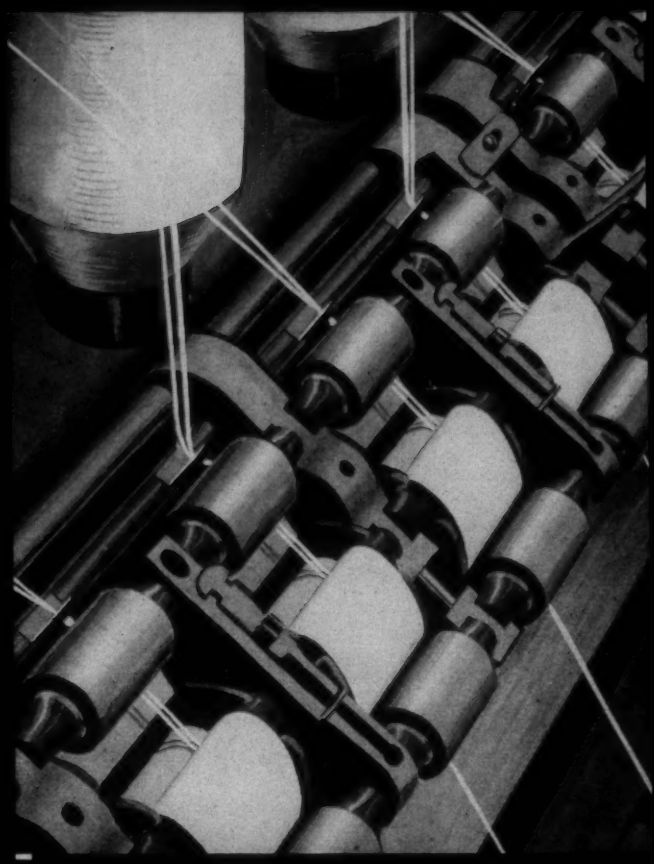
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Best in the long draft!



**Dayco Long Draft Aprons last longer, give up to 10% more uniform yarn!**

Here is a Dayco Long Draft Apron. It will outperform any apron on your frames, give you up to 10% more uniform yarn. It will stay on the frames when you start up, too.

This Dayco Apron is made in one endless piece, without laps or splices that can tear the sliver. Its thickness is uniform. (To get technical: inside diameters are held to a tolerance of 1/64″, thickness to .050″, plus or minus .002″.) Such accuracy gives as much as 10% more uniform yarn. Correct friction coefficient on both inside and outside surfaces. Each apron is tested to meet customer specifications for single or double apron system.

The Dayco Long Draft Apron WILL: last longer, give more uniform yarn, handle natural and synthetic fibers equally well, keep yarn clean (white drafting surface). It WILL NOT: curl, split, crack, break, distort, stretch or groove. Won't flip off, pick up lint, mark the yarn, or be affected by heat, cold, oils, humidity, dyes or hard ends. To cut costs in your long draft operations, write:

THE DAYTON RUBBER CO., *Textile Division*
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Dayton Rubber

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# STEP UP PRODUCTION

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A SHEET METAL WORKS SERVING TEXTILE MILLS



*Outstanding fastness to light*

## PONTAMINE* Fast Violet 4RL

For cotton or viscose rayon . . . in pale or heavy shades. PONTAMINE Fast Violet 4RL is especially well-suited to the production of deep reddish-violet and mauve shades. It can be used as a reddening element for beige, gray, and taupe shades.

Besides outstanding light-fastness, this dye has good resistance to laundering, dry cleaning, perspiration and dry crocking. It is readily soluble, has good absorption, penetrates thoroughly and yields level dyeing.

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E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

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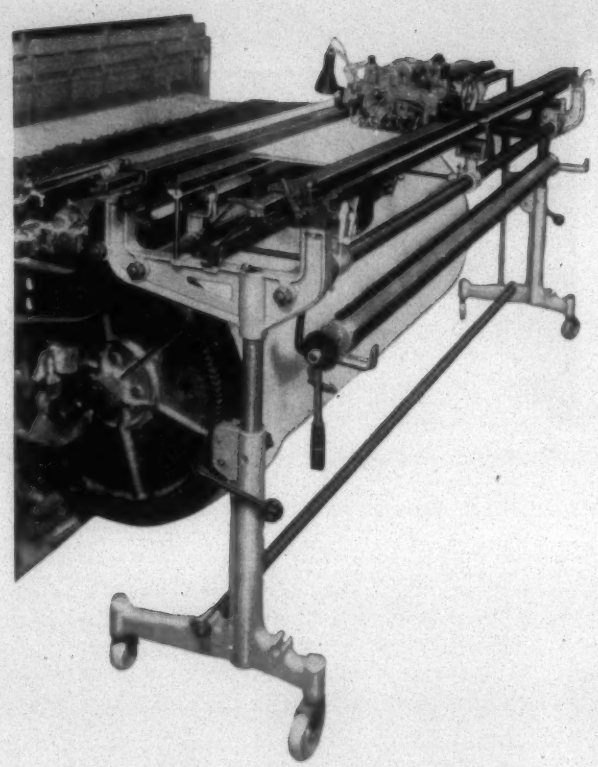
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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

# Warp Tying accelerated

## from 30% to 70%

# with the "Little Uster"



USTER

Here are several typical examples:

Tying 20 warps of 3,120 ends of 24's—30's cotton in 8 hours in a Carolina mill.

Tying 10 warps of 10,000 ends of filament rayon in 8 hours in a Virginia mill.

Tying 12 warps of 6,000 ends of 16's—20's cotton in 8 hours in an Alabama mill.

Tying 8 warps of 11,000 ends of filament Nylon and rayon in 8 hours in a New England mill.

Tying 12 warps of 8,000 ends of filament rayon in 8 hours in a Pennsylvania mill.

Whether tying cotton, wool, worsted, rayon, Nylon, asbestos, plastic, or warps containing a combination of different yarns, the "Little Uster" does the job right—operating either portable or stationary.

The "Little Uster" is the most versatile, fastest, and most efficient warp tying machine made. For more information write for booklet 72A.

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*first impressions are important*

**Make your textiles sell on sight**

**with** *National Aniline Dyes*

**NATIONAL ANILINE DIVISION**
ALLIED CHEMICAL AND DYE CORPORATION
**40 RECTOR STREET, NEW YORK 6, N. Y.**

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
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# 5 big reasons for using Houghton Sizing Compound:

## 1. Greater breaking strength

Houghton formula: 14.9% over unsized

Former formula: 4.0%

Blends of dull viscose and acetate comparatively sized show greater increase in breaking strength when Houghton compounds are used.

## 2. More size added

By Houghton formula: 11.7%

By former formula: 8.3%



## 3. Less shedding

Lint around looms collected after two days' comparative run showed 14 lbs. of shed from warps sized by former process . . . only 8 lbs. from warps sized with Houghton compounds. More size is added, *and* more size stays where needed!

## 4. Lower cost

Houghton formula: 14 lbs. added ingredients

Former formula: 46 lbs. added ingredients

**PLUS**

## 5. BETTER WEAVING!

Loom efficiency increased from 90% to 96%!

# HOUGHTO-SIZE

MADE BY E. F. HOUGHTON & CO., PHILADELPHIA AND CHARLOTTE

# Publication Announcement—




By W. A. GRAHAM CLARK

You (mill officials, selling house executives, students, professors) have been asking for it—in fact you have *begged* for it!

Now, after three years of work by the author and publisher, the third edition of *Clark's Weave Room Calculations* is available.

Since exhaustion of the second edition there have been many requests for this book from men actively engaged in the manufacture and sale of cotton goods, and a large number of increasingly urgent requests from textile school students and professors. The latter are interested primarily in the first part of the book—that dealing with cotton cloth calculations. In the revision of the first part (96 pages) some additional rules have been included, making a total of 74, along with further pertinent information—particularly as to loom speeds and the number of looms per weaver.

The second part of this new edition shows full particulars (width, weight, ends and picks, and warp and filling yarn numbers) for several thousand cotton cloths, grouped in tables appropriate to various sectors of the weaving industry. In the revision there have been added more than 700 fabrics, many of which attained importance during World War II. For some 1,900 plainwoven fabrics there have been added data as to the BYT (effective yards of yarn per pound of cloth) which also serves as the basis of the classification into groups.

The author, W. A. Graham Clark, retired last year after many years as chief of the textile division of the United States Tariff Commission. His practical and *absolutely accurate* treatise of cotton yarn and cloth calculations should find wide application in the textile industry.

*Price*
*$5*

*244*
*pages*

*Cloth*
*bound*

Book Dept., Clark Publishing Co., Charlotte 1, N. C.

Please send_____copy(ies) of CLARK'S WEAVE ROOM CALCULATIONS (third edition) at $5 each.

*Check one* { _____Payment enclosed with order (publisher pays postage).
_____Send bill upon shipment (postage charged to buyer).

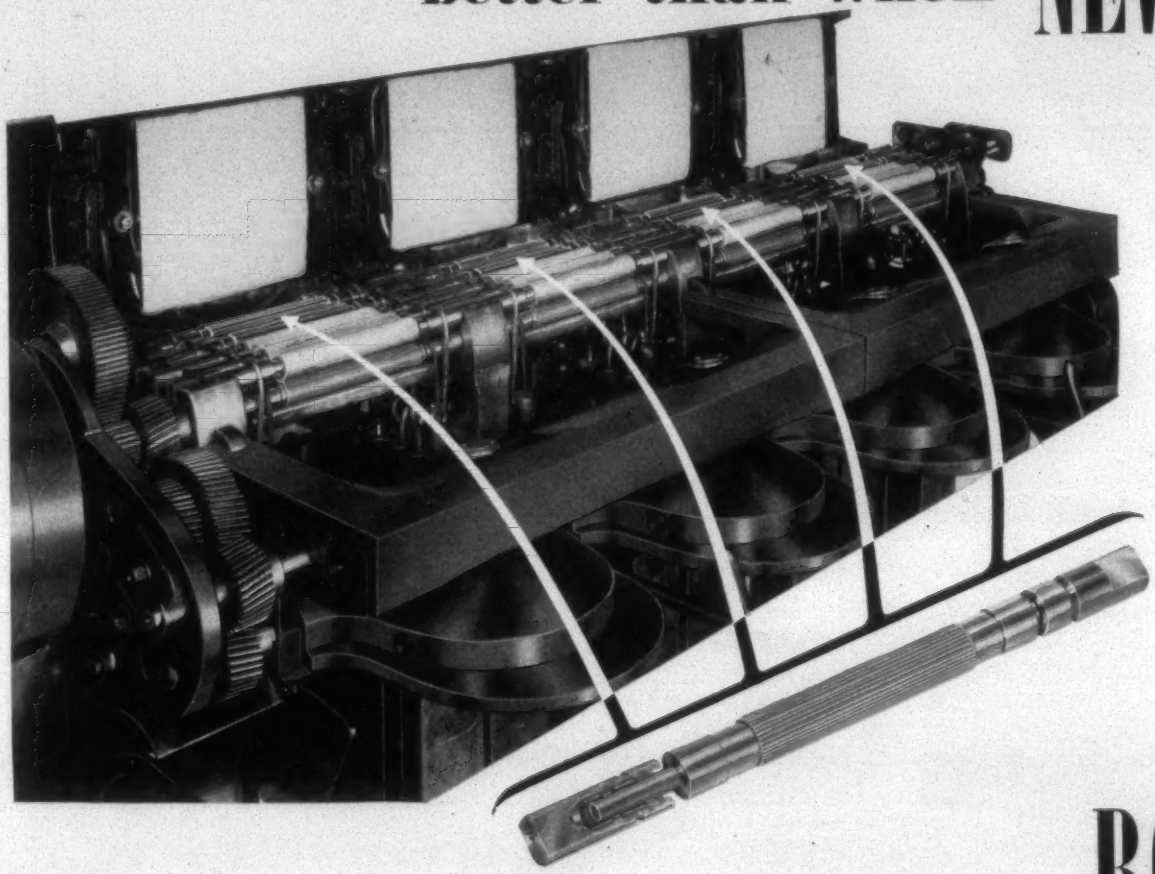
Signed:_____*(please print)*

_____*(firm)*

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# Make an OLD Drawing Frame better than when NEW!



## with the amazing, revolutionary RGM

GOSSETT technicians rebuilt this old frame from one with 4 rolls 6 ends up to one with 5 rolls 8 ends up. The first, second and third line rolls, top and bottom, are common rolls made by Gossett . . . the fourth and fifth line rolls are the amazing, newly developed RGM metallic rolls made by Gossett and which are so hard that even a steel file cannot cut them! The set-up is of graduated pitch flutes.

During the re-building process more things happened to the old Drawing Frame. The top rolls were equipped with Gossett roller bearing shells (there are none better) . . . so this old frame will now draft 8 to 11. Further, we installed new stands, new calender rolls, new tension train of spiral gears and studs, new drafting gears and studs and re-built the coilers, can tackles and installed new trumpets.

Yes . . . it's an old Drawing Frame better now than when new. Takes know-how and equipment. Gossett has both PLUS the amazing and exclusive RGM metallic roll.

GOSSETT will also re-build Drawing Frames with the 4-roll system in the same manner.

### More About the RGM METALLIC DRAWING ROLL

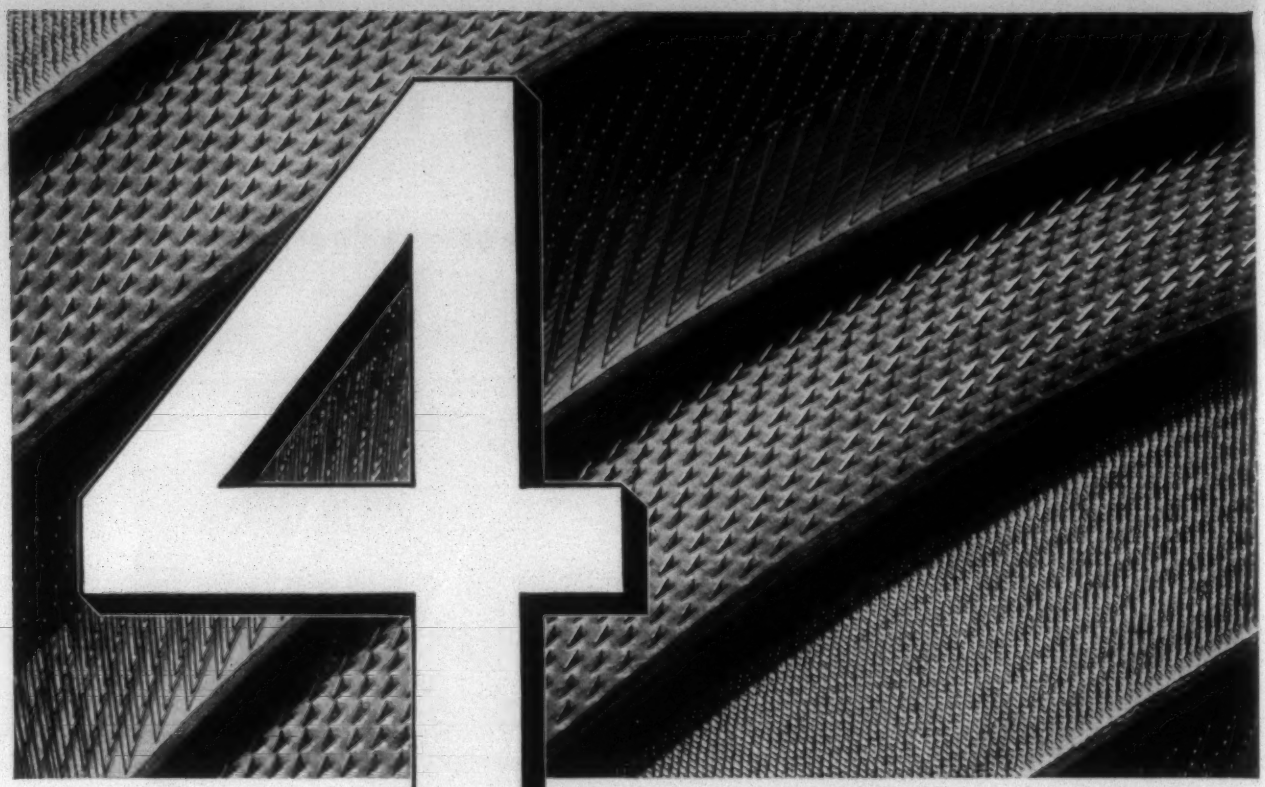
The flutes and collars have been so hardened by the Gossett exclusive method that even synthetics will not wear them down. The flutes on the RGM roll are so precision made that no tool marks can be found. The tolerance on the flutes, collars and neck is plus or minus .0005.

*Write for full particulars and estimated cost*

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Specify Ashworth and get not only continuity of deliveries, but also uniformly high quality resulting from 90 years of experience in cards and card clothing by one family.

Ashworth can help you to make your cards more efficient. Ask us about Ashworth Surveys.

*Visit Us At Southern Textile Exposition—Sections 122 and 123*

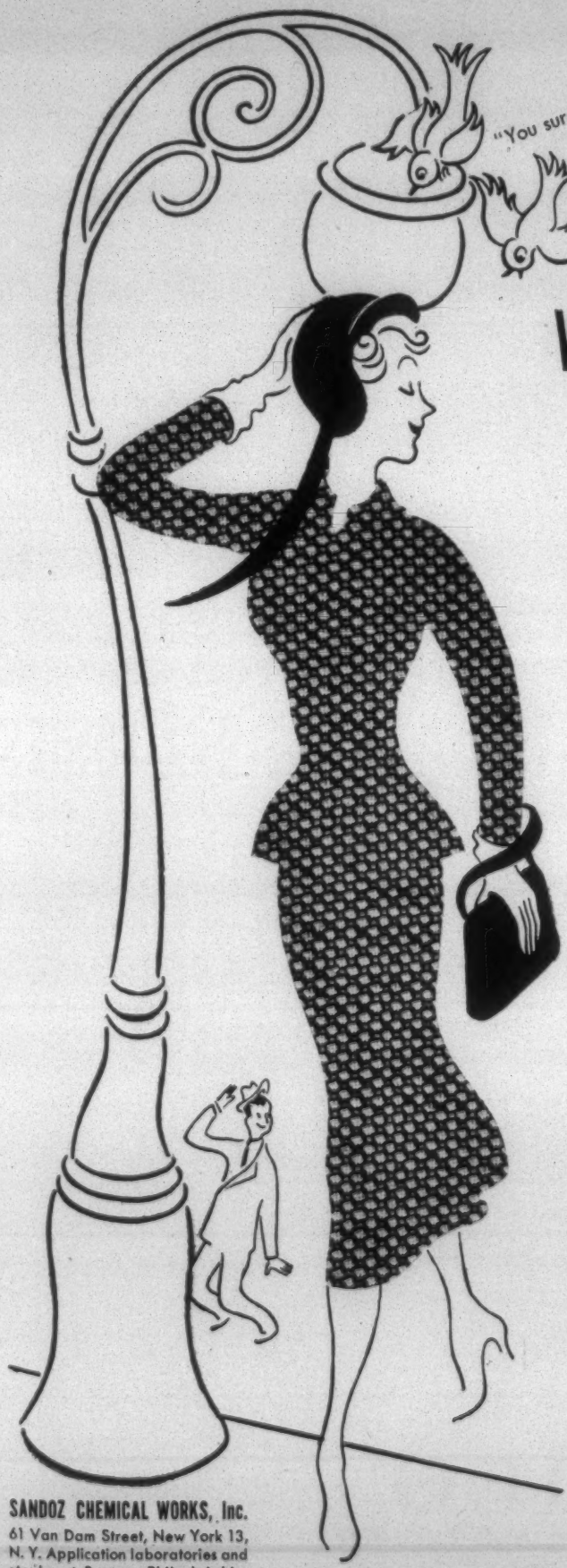
## ASHWORTH BROS., INC.

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Charlotte†‡ Dallas†‡ (Textile Supply Co.)

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**4 FACTORIES • • • 6 REPAIR SHOPS • • • 7 DISTRIBUTING POINTS**




# When you Direct Dye with Cuprofix you save the extra cost of vat dyes

Now you can satisfy customer requirements for fastness and save the extra cost of vat colors by direct dyeing women's suiting fabrics in the yarn or piece with CUPROFIX colors and CUPROFIX after-treatment.

For CUPROFIX, in many instances, gives a fastness to washing, light, perspiration, wet crocking and hot wet pressing that formerly required the more expensive vat dyeing method. Fabrics requiring resin treatment are processed much more efficiently and with even faster results when CUPROFIX is included in the resin bath. CUPROFIX does not affect anti-crease qualities or tensile strength of fibres.

Many mills throughout the country are now direct dyeing many types of fabrics the CUPROFIX way and have reported substantial savings in dyestuff costs—particularly when dyeing darker shades.

*Write for specific information telling how CUPROFIX can help you with your dyeing problem.*

Fast to Light · Wash · Perspiration
Pressing · Cleaning

**CUPROFIX**

BY SANDOZ

**SANDOZ CHEMICAL WORKS, Inc.**
61 Van Dam Street, New York 13, N. Y. Application laboratories and stocks at Boston, Philadelphia, Charlotte, Los Angeles, Toronto. Other branches at Providence, Paterson, Chicago.

**SANDOZ** *thinks ahead with textiles*

SANDOZ




*Exhibit of both Amco ductless and duct systems at American Textile Machinery Exposition at Atlantic City*

# We can afford to be impartial

It should be a relief to you to know that when you ask the advice of an Amco engineer on the humidification and cooling system best suited for a particular room or for your entire mill, you will get from him sound, impartial advice.

Having both ductless and duct systems to offer, he can give you unbiased recommendations. If you already have a modern, efficient humidification system and seek to add COOLING he will probably point out to you the advantages of an Amco ductless system in which you discard nothing and make only a modest addition to your present humidification system.

On the other hand, if your proposed installation calls for a unit duct or a central station air conditioning system, Amco can handle the job.

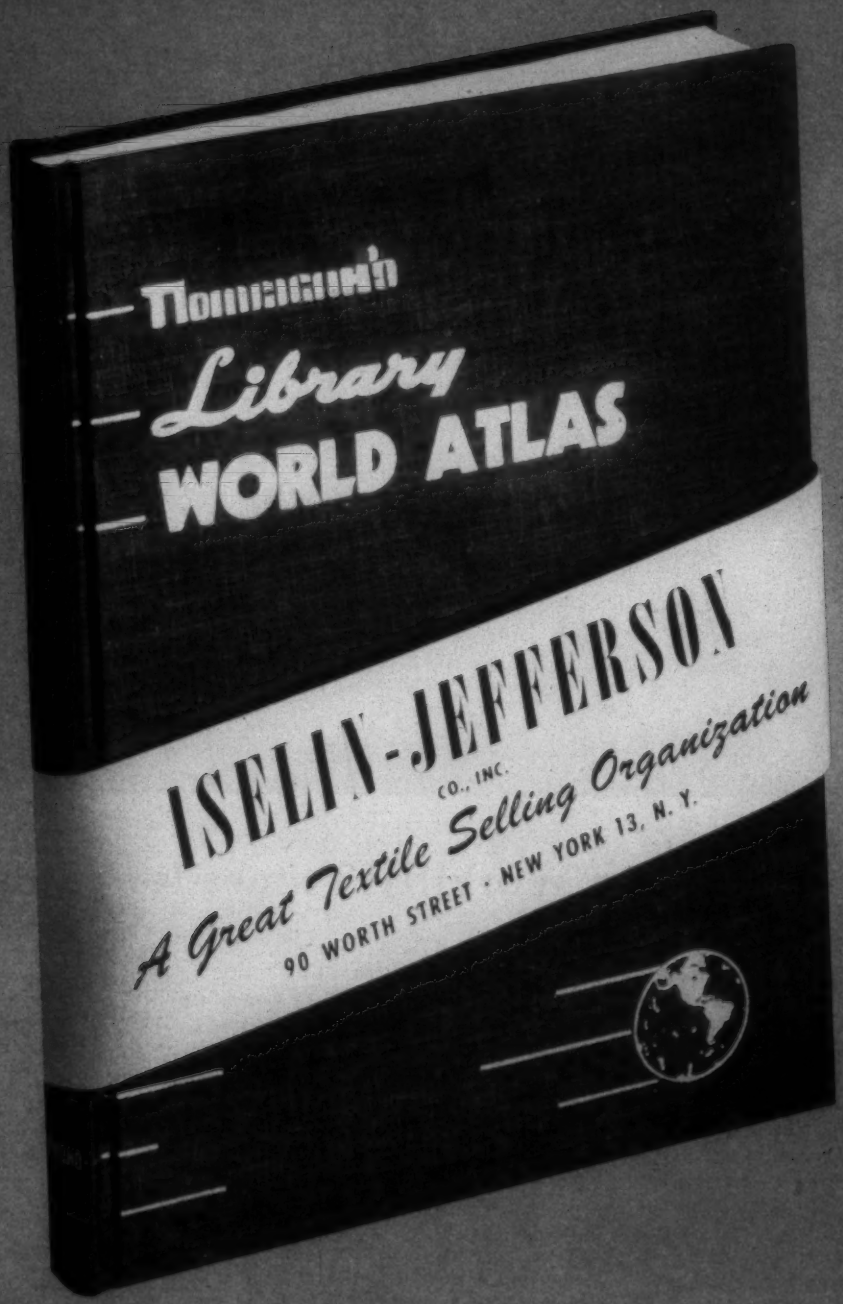
In either case you will get reliable, unbiased advice and expert installation of a system tailored exactly to your needs. Wouldn't now be a good time to call an Amco engineer?

AMCO

**HUMIDIFICATION AND COOLING**

AMERICAN MOISTENING CO., AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

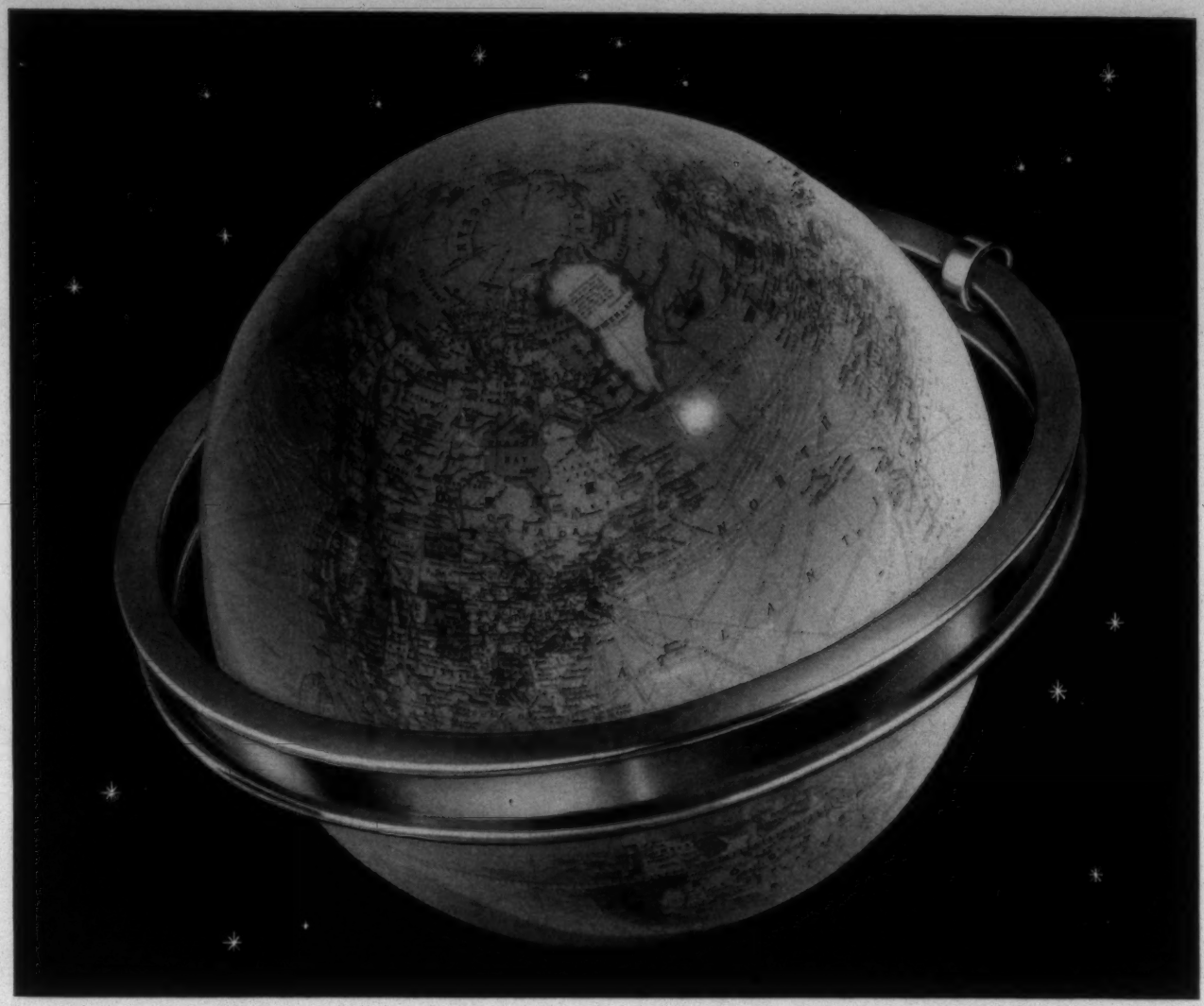
# WHEREVER TEXTILES ARE SOLD




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TORONTO – Bernard Radley & Co., Ltd.



# 'Round the World 1113 times for $1.00

Calculations based on performance records of Victor 4/0 F1.1 X3D Travelers show that one dollar's worth ran about 27,840,000 miles — 1113 times the distance around the equator.

When you see performance like that, it's easy to think that traveler costs are too small to be worth bothering about. But such records are achieved only when you choose the right traveler for the job, and get the best that money can buy.

Selecting travelers carelessly, without proper regard for quality, will quickly cut down the "mileage". Also, excessive ends down, plus frequent traveler changes, can boost your traveler-pound cost in yarn production far out of line.

When you choose Victor Travelers, a Victor Service Engineer will help you make sure to get the traveler best suited to your individual spinning or twisting. You also get extra long traveler-life, because Victor Travelers take top honors in any test for quality and uniformity.

Remember, traveler costs per pound of yarn depend, *never* on price, *always* on performance. Plan now to talk to a Victor man, whether you are running conventional fibers, synthetics, or blends. Write, wire or phone the nearest Victor office . . . for prompt service.

•



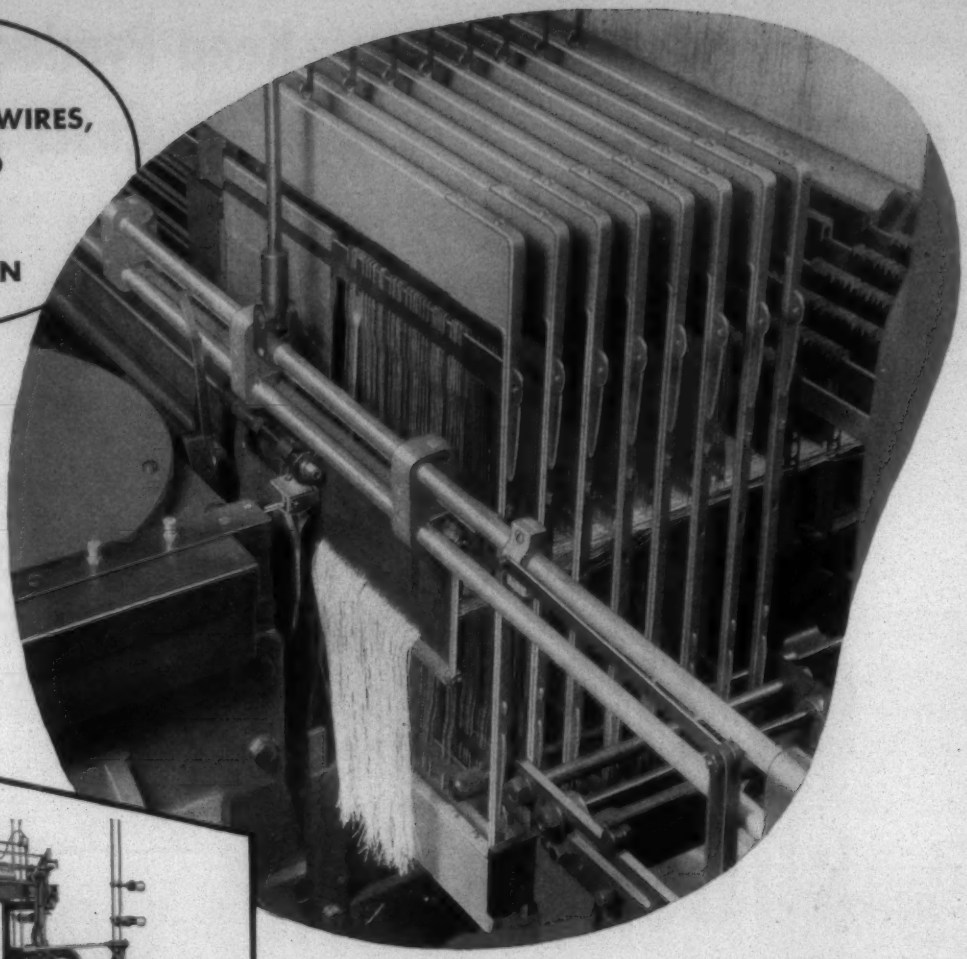

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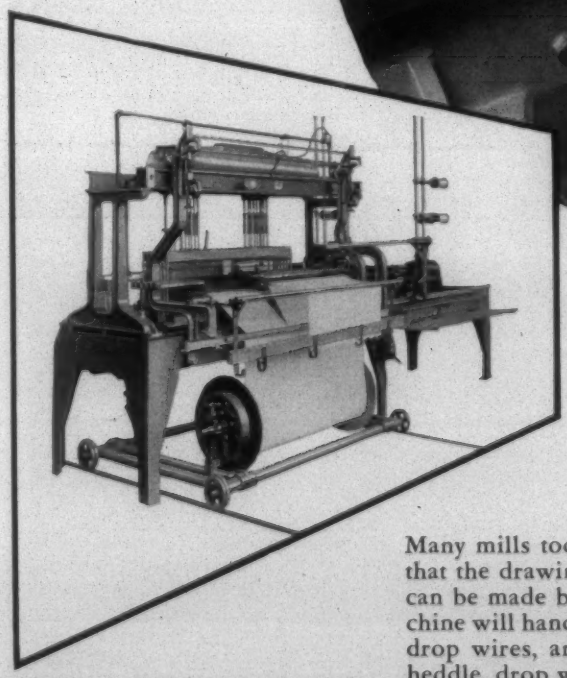
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DRAWS-IN
HEDDLES, DROP WIRES,
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IN **ONE**
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★ VERSATILE...
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# BARBER-COLMAN DRAWING-IN MACHINE

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

*Reduce Costs!*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

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Jarrett's TRADE MARK
META-CLEAN

# clean equipment on the spot!

STOP WASTING precious hours moving textile equipment within range of antiquated steam cleaning facilities. Clean all machinery with *unprecedented speed* with Jarrett's META-CLEAN!

THIS REVOLUTIONARY and exclusive cleaning formula is completely versatile! Spray it on . . . wipe it on . . . brush it on . . . immerse! Then wipe off or blow off with air pressure hose. Absolutely no change in cleaning methods is necessary with Jarrett's META-CLEAN.

FIGURE THE PRODUCTION TIME you are losing in your plant right now—just in equipment cleaning. This time is drastically reduced when you switch to Jarrett's META-CLEAN because Jarrett's META-CLEAN cuts cleaning time *seven times!* In addition, production time lost in moving machinery is saved . . . *plus the labor!*

JARRETT'S META-CLEAN is unbelievably economical. One part Jarrett's META-CLEAN in *twenty parts water* does the trick. It penetrates stubborn grease, lint and dirt instantly—cleans without harm to skin or machinery. Effective universally on all textile machinery throughout the industry. Excellent for cleaning small parts.

*Write!*

GET THE FACTS NOW! Write for names of mills using Jarrett's META-CLEAN (and glad they are!) Write for actual demonstration in action in your own plant, or send your purchase order at once for this fully guaranteed, proven product. Jarrett's META-CLEAN is covered by product liability insurance. In full, half and quarter drums.

SATISFACTION *GIVEN*—NOT PROMISED.

**CECIL H. JARRETT CO., INC.**

***Manufacturer and Distributor of Chemicals and Supplies***

***Newton, North Carolina***

**Keep Production Costs DOWN**

*bleach with*

**SOLVAY LIQUID CHLORINE**

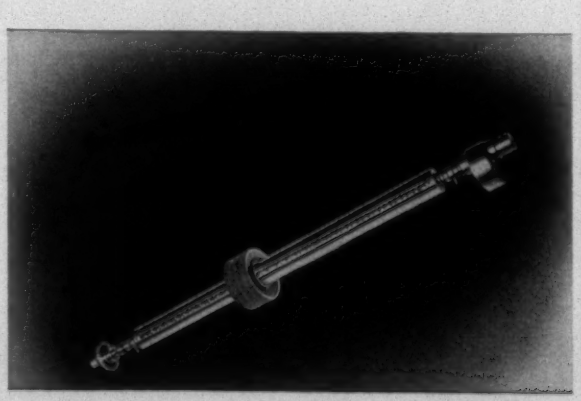
Yes, SOLVAY LIQUID CHLORINE gives uniform, dependable results at less cost! That's why many leading textile firms have been using this quality bleaching agent for years.

SEND FOR YOUR FREE COPY OF SOLVAY TECHNICAL BULLETIN No. 7—"LIQUID CHLORINE"

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ALLIED CHEMICAL & DYE CORPORATION

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Card Grinders for the woolen, worsted and cotton industries . . . Grinders for Calender Rolls . . . Special Traverse Mechanisms.

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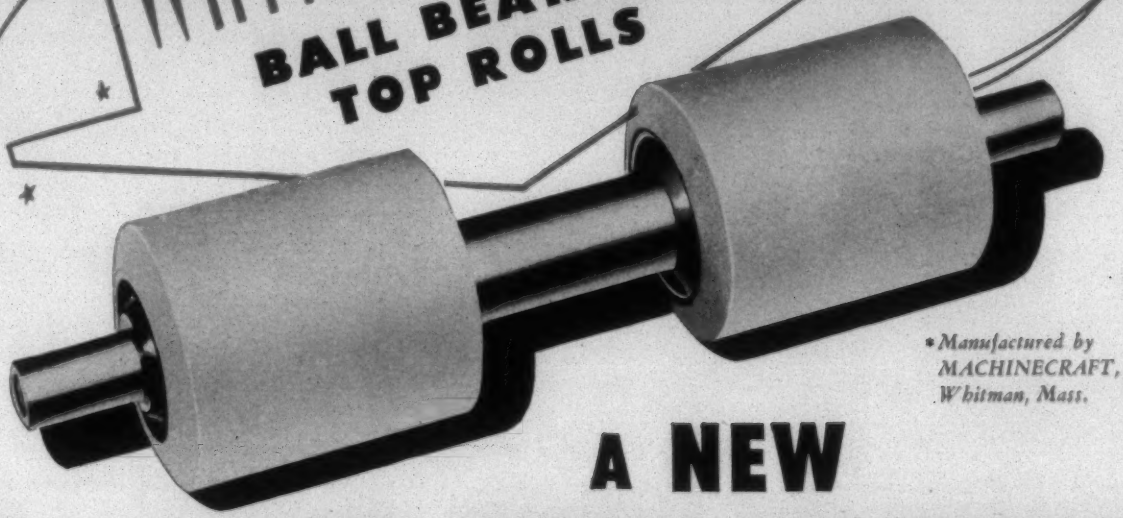
*Sales Engineers in the South:*

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# WHITIN-CLIMAX*

## BALL BEARING TOP ROLLS



*Manufactured by MACHINECRAFT, INC. Whitman, Mass.

# A NEW COST-CUTTING COMBINATION

Over a period of four years these ball bearing top rolls have been thoroughly tested in leading textile mills. Whitin has now adopted them as standard for cotton roving and spinning, wool and worsted spinning and American System equipment, when anti-friction rolls are specified. These anti-friction rolls have sealed-in lubrication insuring many years of service free from lubrication problems.

**FEATURES:**

1. Reduction in oiling costs
2. Elimination of ends down when starting machine
3. No oil drip or stains on cots
4. No oil stained fibers
5. Perfect rotating synchronization of top and bottom rolls
6. Improved yarn quality
7. Improvement of fiber control in drafting zone
8. Reduction in roll picking
9. Eliminates lapping of lint on journals
10. Less machine down time
11. Elimination of wear on cap bars and saddles
12. Precision manufacture permits easy interchange of parts
13. Available with standard coverings, as specified

**Whitin MACHINE WORKS**

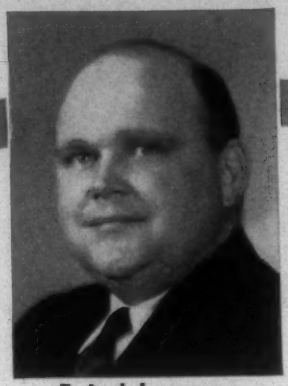
WHITINSVILLE, MASSACHUSETTS

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They get around . . . run into all kinds of carding problems . . . know most of the answers or can get them promptly . . . willingly share their knowledge.

They represent a complete line of the very finest card clothing products. They are more interested in making you a long term customer than in making an immediate sale. Ask one of them to survey your cards and get his suggestions for improvements. There is not the slightest cost or obligation.

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A-8

TUFFER CARD CLOTHING

**IMPROVES PRODUCTION ALL ALONG THE LINE**

# SPRINGS EQUIPS WITH H & B SUPER DRAFT

## New H & B Frames Now Being Installed

H & B's new Super High-Draft Spinning System, first announced in February of this year, is now being installed in the Lancaster plant of the Springs Cotton Mills.

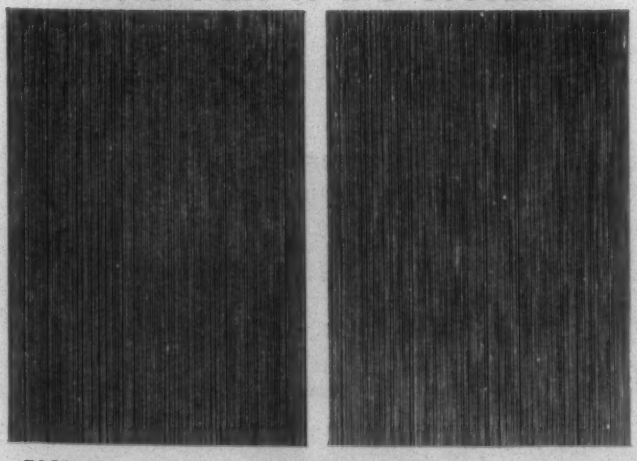
Colonel Elliott White Springs disclosed the delivery of a substantial number of frames in a 60,000 spindle order. An additional number of existing spindles will also be changed over to the new super draft system.



**AERIAL VIEW** of Springs Mills Lancaster plant where 148 new H & B Super High-Draft frames are now being installed in a new six-story addition.

Excellent results have already been obtained in spinning 30's yarn from a .60 hank roving with a draft of 50, using run-of-the-market, bright, strict low middling, 1 1/16" cotton

## QUALITY — STRENGTH — ECONOMY IN HIGH DRAFT SPINNING WITH NEW H & B SYSTEM



**PICTURE,** at left shows SPRINGMAID yarn with a draft of 50. At right is yarn with a draft of 18. The same drawing sliver was used.

### SPRINGS LAB PROOF OF TYPICAL BREAKS 30's YARN – DRAFT OF 50

| Yarn Count | Strength Skein (Lbs.) | Break Factor |
|---|---|---|
| 31.2 | 87 | 2714 |
| 31.3 | 85 | 2661 |
| 31.0 | 86 | 2666 |
| 30.5 | 88 | 2684 |
| 30.8 | 85 | 2618 |
| 31.5 | 83 | 2615 |
| 30.9 | 88 | 2719 |
| 30.4 | 89 | 2706 |
| 30.2 | 89 | 2688 |
| 30.0 | 86 | 2580 |
| 30.0 | 87 | 2610 |
| 30.6 | 83 | 2540 |
| 29.2 | 99 | 2891 |
| 30.8 | 89 | 2741 |
| 30.3 | 91 | 2757 |
| 28.9 | 89 | 2572 |
| Av. 30.5 | 87.8 | 2677 |

Average Skein strength (in pounds) corrected to 30's yarn — 89.6

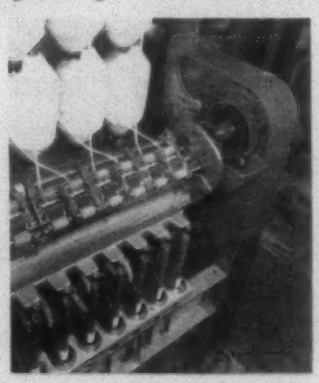
By Formula —

$$S2 \text{ equals } \frac{C1S1 - (C2-C1)\ 21.7}{C2}$$

Standard Laboratory conditions 65% relative humidity at 74 degrees F dry bulb temperature. Roving: Lancaster Plant regular .60 slubber. Cotton: Regular Lancaster mix BSL, 1-1/16 average.

## High Drafts Give Quality Yarn At H & B Exhibit

Visitors at the American Textile Machinery Exhibition at Atlantic City were given actual proof of the capabilities of the H & B Casablancas Super High-Draft System. In running demonstrations 30's yarn was produced from a .75 hank roving single using 1 1/16" Acala cotton and accomplishing a draft of 40.



**H & B CASABLANCAS** Super High-Draft System as shown at Atlantic City.

H & B considers this demonstration and the Springs Mills installation as conclusive proof that its new system is the most outstanding on the market today.

Builders of MODERN TEXTILE MACHINERY

# H&B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.

BRANCH OFFICES: Atlanta, Ga. 815 Citizens and Southern National Bank Bldg.; Charlotte, N.C. 1201 Johnston Bldg.

# When the Chemist turned Salesman








**"LOOK,"** the new purchasing agent said, "about all these Calgon* requisitions. Calgon — Calgon — Calgon — how come nothing else will do?"

The chemist moved his beaker from the Bunsen burner. "How come?"

"Yes, take cost alone . . . "

"Cost *alone?* Didn't you tell me Monday week that you purchasing agents rate quality and service ahead of cost?"

**"THAT'S RIGHT.** Is Calgon quality stuff?"



"Yessir." The chemist brandished his beaker tongs for emphasis. "With Calgon we *know* every single batch is up to standard and fully effective."

**"BUT A SMART CHEMIST** like you certainly doesn't need any service."

**"I WOULDN'T** rightly say that, mister. We know this business pretty near inside out, but I've seen us get stumped by some bug in our process—and get set straight by the Calgon chemists. They pioneered the new look in phosphates and they still teach us *plenty."*



The new purchasing agent interrupted, "Seems like Calgon's service is actually worth money to us?"

**THE CHEMIST SAID,** "It sure is . . . in more ways than one."

**THE NEW PURCHASING AGENT** smiled. "Thanks. I just wanted to get things straight right from the start. I figured that's how you'd feel . . . so I went ahead and ordered Calgon as usual."



*T.M. Reg. U.S. Pat. Off.

HAGAN HALL BUROMIN CALGON

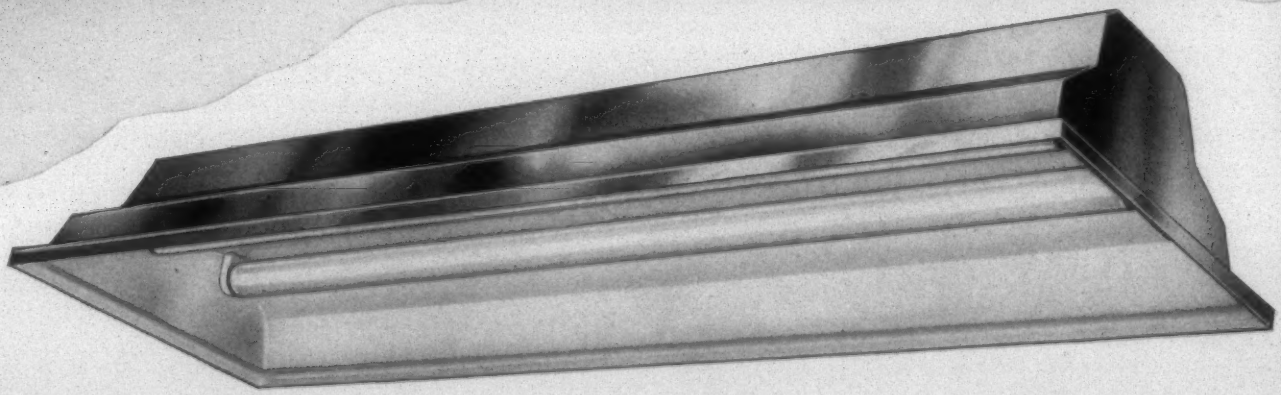
calgon, inc.

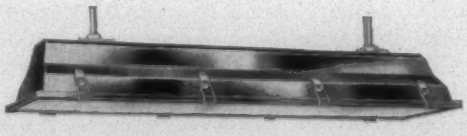
A SUBSIDIARY OF HAGAN CORPORATION

HAGAN BUILDING PITTSBURGH 30, PA.

# Wheeler Textilume

**. . . the textile lighting fixture that withstands the most severe moisture and humidity conditions.**





- Hinged type glass covers which effectively protect reflecting surfaces against the entrance of dirt and moisture are available for quick and easy attachment to Textilume Fixtures.

- One-piece, all-welded steel body — completely sealed in seamless vitreous porcelain enamel.
- *Non-corroding* — no cracks or crevices, moisture cannot collect and cause rust.
- Operating equipment easily accessible — mounted on easily removable wiring channel.
- *High reflection factor guarantees maximum illumination* — scientifically designed to assure perfect light control.

For complete information write Wheeler Reflector Co.
275 Congress Street, Boston 10, Massachusetts

**Wheeler REFLECTORS**

Distributed Exclusively Through Electrical Wholesalers

MADE BY SPECIALISTS IN "SKILLED LIGHTING" EQUIPMENT SINCE 1881

## Textiles And Tariffs

MOST of us look elsewhere when we see the word "tariff" in a newspaper or a magazine. . . "Just some more dry and boring talk about economics," we say. But the word "tariff" has come to have a vital meaning and a close relationship to your everyday welfare and mine within the past few weeks.

The Department of State in Washington wants to lower the tariff on foreign made goods brought into this country. They say the reason for this is to help foreign nations, particularly those which were at our throats only a few short years ago, to re-establish their economic independence. One of the main groups of imports selected for this dangerous experiment is cotton textiles.

What does this risky scheme mean to all of us? It means the removal of the shield which has protected our jobs, our income, and the product we make, from unfair competition with nations whose standard of living is so far beneath our own that there is no real basis for comparison. It means practically the same thing as bringing in countless numbers of competing Japanese, Germans, and other foreigners who are now working for and will continue to work for from ten cents an hour to about half our present wages. It means that your Federal Government is taxing you more heavily each year in order to send machinery abroad to these foreigners, who will make cloth with it for a wage of ten cents an hour—this cloth, if the tariff is reduced, will be brought into this country and will so far undersell the cloth we are making as to force either a shutdown or a drastic lowering of wages.

It has been said that an old ox makes a straight furrow. The voices of wise and experienced statesmen such as James F. Byrnes, Burnet R. Maybank, and Walter F. George have already been raised in protest against this ill-conceived plan. When the various candidates for public office come around soliciting your vote this Summer, ask them how they feel about the tariff. Protection has been given farm prices —are they going to protect the jobs and incomes of Southern textile employees, or are they going to allow the State Department theorists to sell us down the river? Let's elect men with good common sense and "gumption" so that a tight rein can be put on the "smart boys" in Washington who would play Santa Claus to the world at our expense.—*Graniteville Bulletin*, Graniteville (S. C.) Co.

## Need For Research

MODERN industry is thriving on research. Often it is the equivalent of a promise for continued prosperity in the future. Almost no field of endeavor remains untouched by the effects of research. The professions, in particular, seem to be nearly swamped merely with the effort of trying to keep up with new developments, so much so, in fact, that the problem of cataloging of literature and reference materials alone is staggering.

If saftey engineering is to be classed as a profession, it cannot be allowed to stagnate. If it does not move ahead, it will go backward; there can be no motionless period. Yet there seems to be a serious dearth of research in even the common problems which safety engineers have been facing for years. We believe that the field is wide open with many new and great opportunities for those who can or will recognize the needs.

What, for example, has been done in the last ten years about the problem of preventing burns—one of the commonest of all industrial accidents—that is basically new in its approach? The same question can be asked about creating the proper safety attitude in management; establishing a modern relationship with labor unions for accident prevention organization; securing desired reactions among working people for the promotion of safety in the plant; changing unsafe habits of people; conserving eyesight through protection of the worker or the removal of the accident hazard; and, for another, aren't most of us still using the same methods for maintaining interest in safety that we were using ten years ago?

It is to be hoped that the colleges which have advanced enough in the last few years to offer formal training in safety are also creating opportunity for research in the subjects which will be of benefit to those in the profession. If, as might be suspected, there are already answers to some of the above questions, are you, as practicing safety engineers, making use of these new materials? Are your sources, of information varied, or are you sticking to the same old routines of reading? Have you really searched for new materials lately, new methods of preventing accidents?—*Chemical Safety*.

## Age Of Research

WE live today in the Age of Research. Never before has the word "research" tripped so familiarly from the American tongue. There are many fields of research, of course. But, perhaps to most minds, the word conjures the picture of quiet laboratories where white-smocked scientists juggle test tubes, retorts and magnifying apparatus in the never-ending search for new causes and effects. The juggling includes molecules which are rearranged from their natural state, possibly to create some new product useful to humanity. Such a product may become the basis of an entirely new industry, or the result may be a new and patentable process of manufacturing a known product more economically and in better quality.

Private industries throughout the land expend hundreds of millions of dollars each year to maintain these laboratories. They have found that it pays off. Research in the laboratories leads to patented inventions. Patents make it possible for the owners to exclude others from utilizing these inventions for a period of 17 years. Capital moves in more confidently. Production plants are started or expanded. More workers are employed. A new product goes to market. The investment in research is returned with interest. Under such a system of patent protection, American industry has thrived beyond all comparison.

Healthy industry means a sound economy by which all of us enjoy better homes, better clothes, more conven-

**FROM CIBA RESEARCH...**

# *Timely Data on Dyeing*

# NYLON

properties of the

## *YOUR INQUIRY IS INVITED on any and all problems arising from the dyeing of Nylon.*

Here at Ciba, we realize that because of its wonderful physical properties the use of Nylon alone or as a blend component is constantly increasing . . . and the dyer's problems in direct proportion.
The dyeing of blends, especially those of Nylon and Wool, may be extremely baffling, and all of these factors play a part in the best color selection...

1. The end use requirements
2. The percentage composition of each fiber
3. The pigmentation in the Nylon
4. The depth of shade to be dyed.

Obviously there can be no such thing as a standard formula applicable to all constructions. Each shade on each blend becomes an individual problem. From exhaustive tests and a compilation of data, we believe we can give you helpful practical advice for your particular fiber or fabric and we invite you to tell us your problem.




**CIBA COMPANY, INC.**

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iences, full employment and a happier way of life.

Without this patent protection, what incentive would there be for industry to invest such fabulous sums in research? Why risk millions to explore the possibilities of a new product with commercial value, if the invention could not be patented to exclude competitors from producing it? Only by our patent system have we prospered through the creation of new industries and the expansion of industries founded through the manufacture of patented inventions.—*Patent Research Reports,* National Patent Council.

## Textile Union Raiding

IT must be rather disconcerting to the thousands of textile workers over the country to read newspaper accounts of efforts to set up "no raid" agreements between the major unions, that officials of the United Textile Workers of America (A.F.L.) had declared a willingness to sign a no-raid agreement with the Textile Workers Union of America (C.I.O.).

But as matters stood at the close of the U.T.W.A. convention, the two were still barking at each other and apparently nothing definite had been accomplished.

This department believes most workers very strongly resent labor unions fighting over who is going to organize who. It smacks too much of adaptation of the old adage that to the victor belong the spoils. And the working men and women resent being placed in the category of spoils.

It has happened, and on more than one occasion, that rival unions have deprived certain individuals of the right to affiliate with the organization of their choice by these very tactics. And yet nobody yells louder than the unions and their officials if it even looks like somebody else is trying to do that very thing.

It is a matter of record that neither the A.F.L. nor the C.I.O. have been able to organize Southern textile workers in anything like the numbers anticipated at the start of the two campaigns in the South. There may be a good reason for this, or several good reasons.

But one thing is certain. Disagreement and bickering among rival unions is not helping the cause at all. Neither are raids by one union upon another.

It is hardly possible for the membership at stake in such raids to form other than the conclusion that somebody is looking for personal aggrandizement or that wholly selfish interests are being served. And that doesn't do a great deal toward whetting their appetite for union affiliation of any sort.—Robert W. Kincey, *Birmingham* (Ala.) *News.*

## Textile Chemists

WHILE much energy is being expended in destruction pursuits, solid satisfaction inheres in contemplation of the record of the American Association of Textile Chemists and Colorists in advancement of constructive objectives.

Equipped with know-how concepts and processes, possessed of technical skills of a very high order of efficiency and constantly striving for further modernization in the textile industry, members of the association for a num-

NON-FLUID OIL
TRADE MARK REGISTERED

FOR LONG DRAFT SPINNING

NON-FLUID OIL is the ideal lubricant for rolls and saddles because it does not drip or leak. The positive lubrication it provides enables top and bottom rolls to maintain correct speed and produce even yarn.

Because NON-FLUID OIL stays in bearings until entirely used up, it outlasts oil, saving on lubricant and application cost. For the same reason, NON-FLUID OIL does not get on top roll covers to blacken yarn.

*We are prepared to furnish mills with skilled engineering service. Write for Bulletin T 13 and free testing sample of NON-FLUID OIL.*

NEW YORK & NEW JERSEY LUBRICANT CO.
292 Madison Avenue, New York 17, N. Y. Works: Newark, N. J.
Southern District Manager: FALLS L. THOMASON, Charlotte, N. C.
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***NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.***

ber of years have worked tirelessly and effectively for important improvements and at the same time for preservation of dependable standards in safety and other spheres.

Among the units of the association, an outstanding record has been achieved by the Piedmont Section. It is to be heartily congratulated for the large contribution which it is making along these purposeful and worthy lines. As the center of much of its program, Charlotte has an abidingly friendly interest in its continued career of broadly and intensively expanding usefulness. It is a decidedly vital factor in much progress which is being attained in its field of endeavor.—*Charlotte* (N. C.) *Observer*.

## Technical Training

THE need for technically trained people was probably never greater than it is now. At the same time, we were never more aware that technical training is not enough by itself.

We cannot have too many men and women who can bring understanding and tolerance to the problems of our times, and where education has such objectives, we cannot have too many educated people.

Those who fear that if we turn out growing numbers of educated men and women we won't have jobs enough for them overlook many things, it seems to me, one of which is that a better educated population is more productive of jobs. The thing to fear is not more education but the lack of it. Furthermore, education is clearly a road to tolerance as the public opinion polls show.

If education is a road to tolerance and peace, it needs no other defense in any society. —*Frank W. Abrams*, chairman of the board, Standard Oil Co. of New Jersey.







**Discover how wonderfully small trifling expenses mount up to large sums.**

—Ben Franklin's Almanac, 1757

**A single per cent saved here and another per cent saved there strengthens thy working capital for the coming year.**

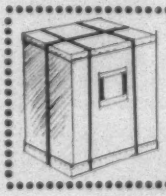
—Acme Steel's Notebook, 1950

Look, Mr. Management, how long has it been since you walked through your shipping room and checked up on your packaging operations?

How long since you sharpened your eye and your pencil on ways to save in shipping and materials handling?

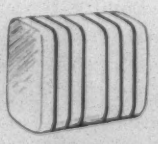
Helping you save money, time, materials, labor is where Acme Steel comes in. Nine out of ten companies start cutting costs when they reach for the telephone and call in one of our sales engineers and get the benefit of what we have learned to do with Acme flat steel strapping, Acme stitching machines and wire, and other Acme Steel products.

We show you here two specific examples of savings by our customers. If you want more evidence, we have hundreds of actual case studies to show you. In fact, more than 45,000 Acme customers are getting the benefits of Acme Methods now. Call the Acme Steel service office nearest you. (There are 45 of these offices in the principal cities of the U.S. and Canada.) Or send the coupon below for more details on your special problems.



**SAVE ON SHIPPING WEIGHT**
This fibreboard box (firmly stitched with Acme Silverstitch wire) ships at the lower bale rate because it is strapped as a bale with Acme Steelstrap.

**ACME STEEL**



**SAVE TIME, SPACE, MONEY!**
Acme Steelstrap is the quick, easy, economical way to bale textiles neatly and securely. Acme Steelstrap gives *sure* protection against everyday shipping hazards.

You're invited to watch us roll out the strip steel when you're in or near Chicago. Our rolling mills at Riverdale, Illinois, covering more than 1,700,000 square feet, house one of the largest, fastest, strip steel operations in the world.

*ATTACH THIS COUPON TO YOUR BUSINESS LETTERHEAD*

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We manufacture _____. Please send me booklets on Acme Methods checked.

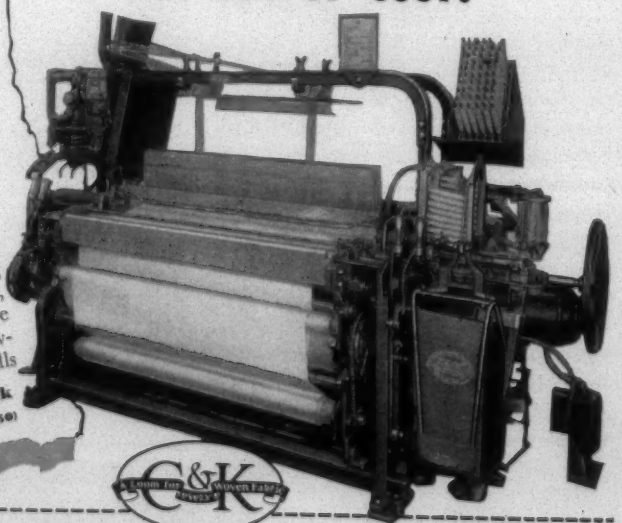
- ☐ Please have sales engineer call.
- ☐ **Bag and Box Assembly**—"Profit by Stitching" demonstrates cost-cutting Acme Silverstitchers and Acme-Champion Stitchers.
- ☐ **Packaging, Shipping, Materials Handling**—"Savings in Shipping" tells how to save money and safeguard customer good will with Acme Steelstrap.
- ☐ **Shipping (Carload and L.C.L.)**—"Acme Unit-Load"—The story of reduced damage claims and better handling for shippers.
- ☐ **Product Assembly**—"Acme-Morrison Metal Stitchers"—for savings in fastening metal-to-metal or metal-to-other materials.
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## Modernize..

### with proved automatic C&K Looms that weave finer fabrics...faster... at lower cost!



**TEXTILES:**
Song of the Loom

At no time in its long history had the need and value of modernization been so forcibly brought home to the textile industry. Some 20,000 textile men—in everything from private Beechcraft planes to chartered Pullmans—converged last week on Atlantic City's cavernous Auditorium. There they inspected more than 1,500 machines worth $5,000,000 exhibited by 200 different manufacturers. It was the first such show in eleven years, and the industry's largest.

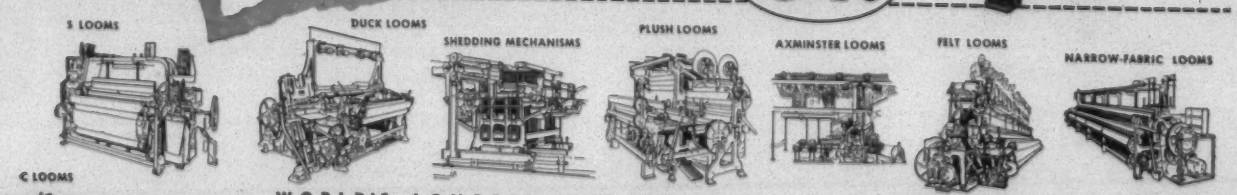
Changes within the industry became even more apparent during last spring's sales and production slump. The major textile companies acted quickly and decisively. By fall, they had unloaded top-heavy stocks by means of sizable price reductions.

**Modernize—or Else:** Last year's shakedown also eliminated many inefficient, high-cost mills. According to the CIO Textile Workers Union, about 117 mills employing nearly 50,000 workers have been liquidated since the war, most of them within the past twelve months.

Despite the industry's technical progress, obsolete equipment still burdens many plants. More competition both at home and abroad is also increasing the need for more efficient operation. Fabric exports—which used to constitute more than a tenth of total output—are down . . .

All of this gave machinery makers at last week's exhibition a ready-made sales argument: Mills with 25-year-old equipment must modernize or give up the ghost. The first five months of 1950 have been fairly prosperous so far, particularly for rayon producers and also for cotton fabric makers. Even woolen and worsted mills, despite high wool prices, are doing slightly better than a year ago. However, the competitive threat posed by more modernized plants, synthetics, and low-cost fabrics from foreign producers spells trouble for the future.

**Newsweek**
(May 22, 1950)



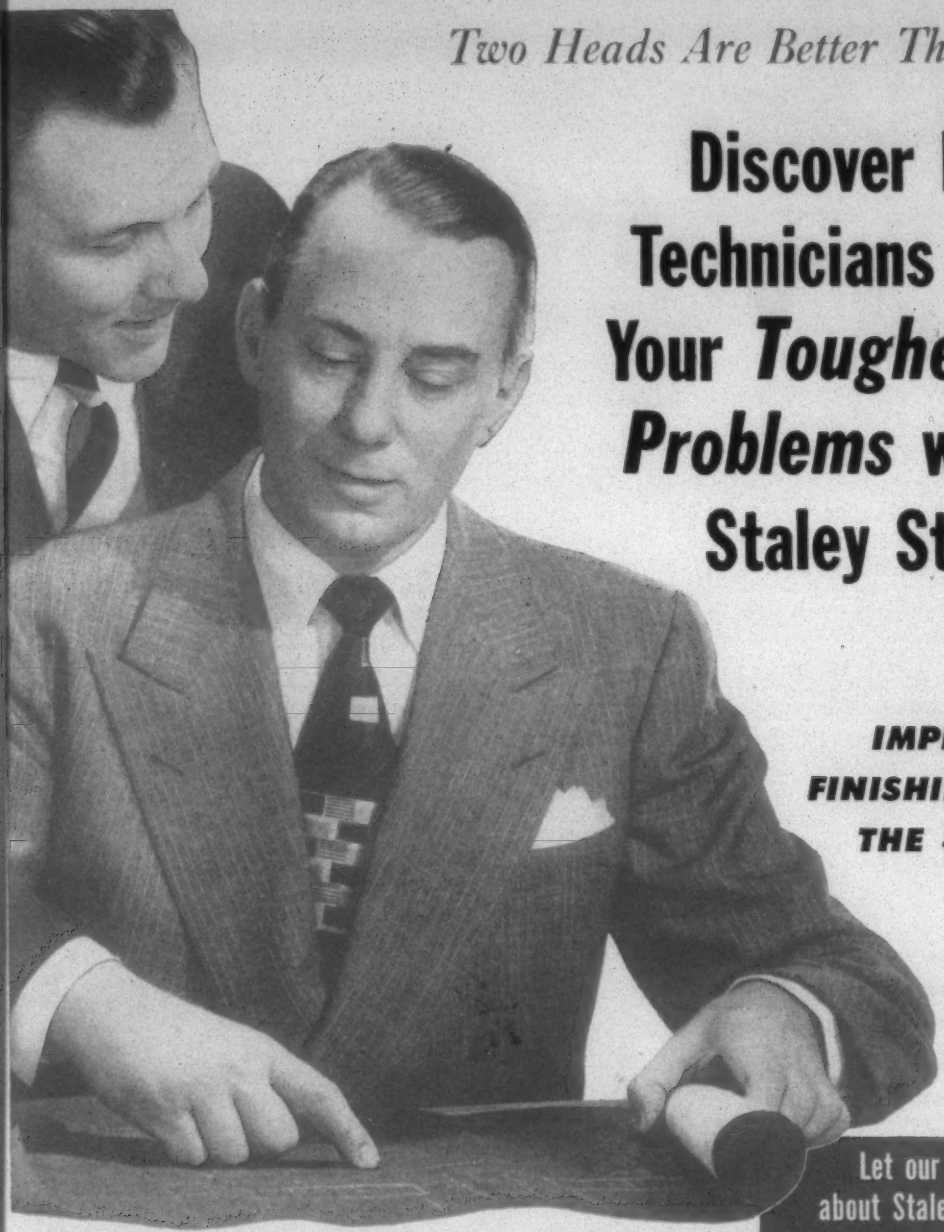

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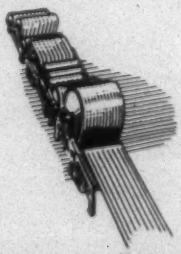
Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

*Two Heads Are Better Than One!*



# Discover How Our Technicians Can Solve Your *Toughest Textile Problems* with Better Staley Starches!

**IMPROVE SIZING, FINISHING, WEAVABILITY THE *Staley* WAY!**



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*City* _____ *State* _____

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**A. E. STALEY MFG. CO., DECATUR, ILL.**

***Dependable Service From These Points:***

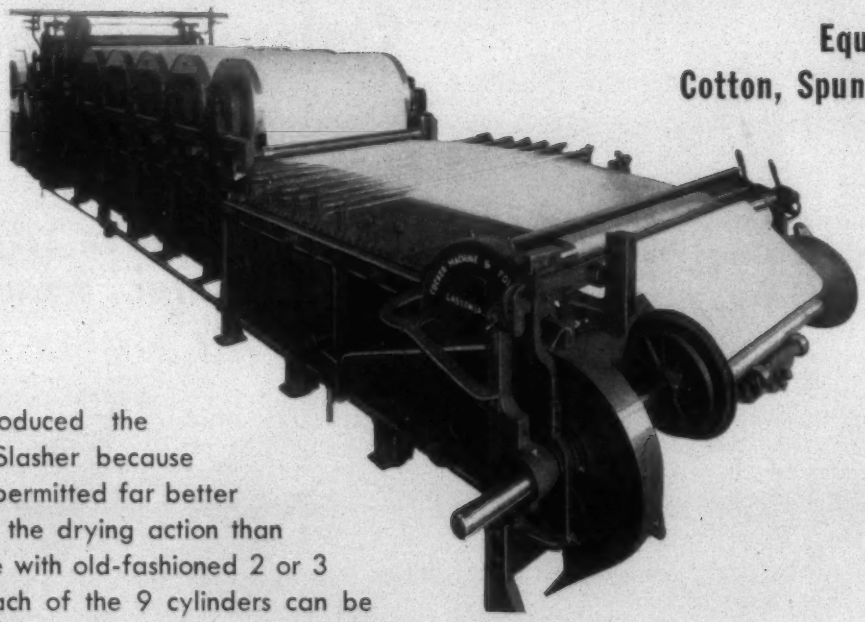
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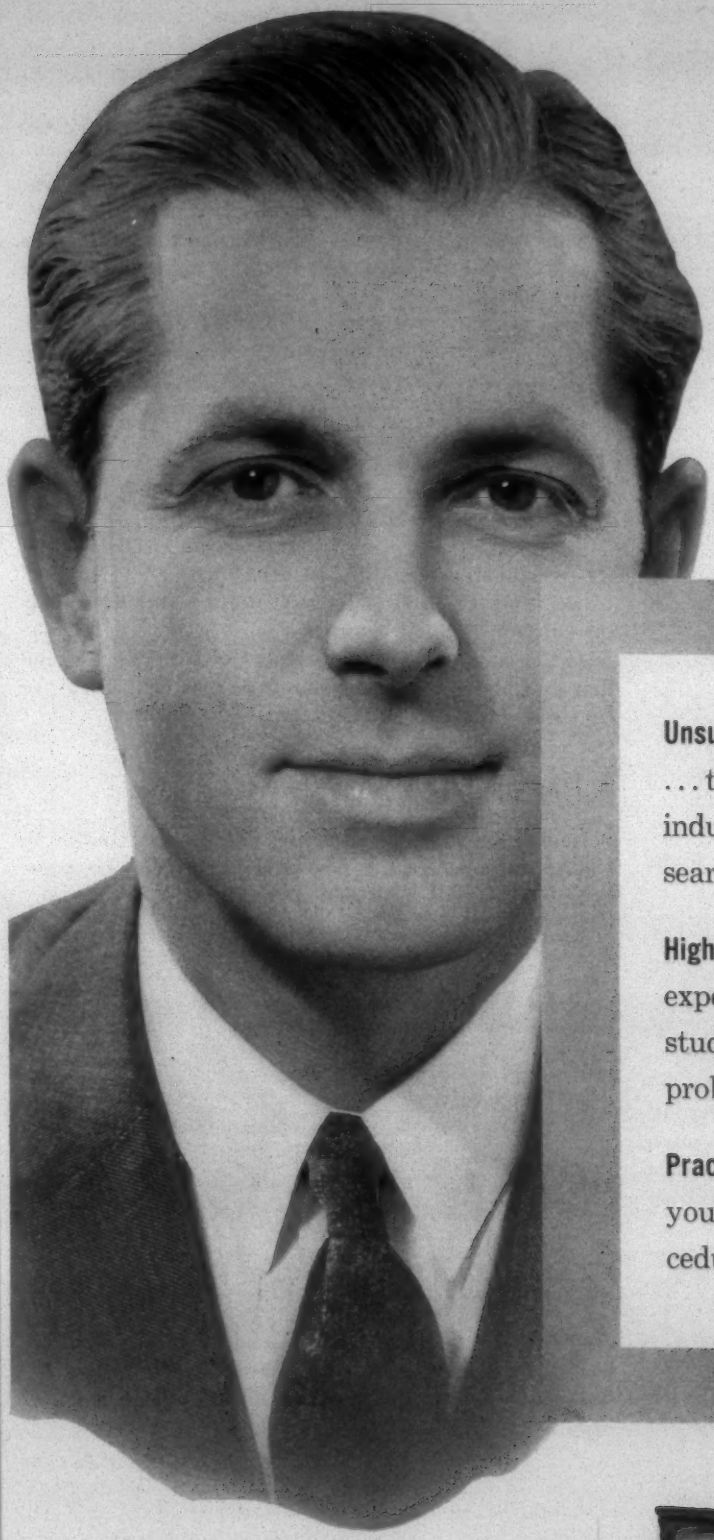
Cocker introduced the 9-Cylinder Slasher because 9 cylinders permitted far better control over the drying action than was possible with old-fashioned 2 or 3 cylinders. Each of the 9 cylinders can be set at a different temperature if desired and each has accurate controls which automatically maintain exactly the correct degree. The result is a far more uniformly dried warp and far less down-time in slashing and weaving operations.

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textile bulletin

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## The Defeat of Frank Graham

Our faith in the people of North Carolina was fully justified on June 27 when Frank P. Graham was defeated for re-election to the United States Senate.

A wave of hysteria, backed by an immense P.A.C.-C.I.O. fund, had caused Frank Graham to lead Willis Smith in the first primary on May 27 by about 53,000 votes.

The people of North Carolina then took a sober second thought and began to think about the votes which Frank Graham would cast if elected to the United States Senate for a term of four years.

He was telling the people of North Carolina that he was opposed to the Federal Government being given power to enforce anti-segregation laws when they knew that he not only had voted, with Pepper and Kefauver and against all the other Southern Senators, to do away with segregation laws in Washington, D. C., and the District of Columbia but against even permitting the citizens of that area to vote upon the subject.

Although Frank Graham carefully avoided any explanation of his vote for anti-segregation in the District of Columbia, the people of North Carolina did not see how he could cast that vote and still claim that he was opposed to federal anti-segregation laws.

Frank Graham attempted to obtain votes by saying that he was in favor of the Taft-Hartley Law *provided the injunction clause was removed.*

The people had sense enough to know that if the injunction feature was removed the Taft-Hartley Law would be ineffective and that was exactly what Frank Graham desired.

In a radio debate on the night prior to the second primary, the Frank Graham supporter asserted that Graham had joined over 150 organizations, most of which might be classified as affiliated with Communism.

A great laugh went up over North Carolina when the supporter asserted that Frank Graham joined most of them in order to keep Communists out.

A great effort, continued since his defeat, was made to picture Frank Graham as a "great man."

No one ever made any effort to show what Frank Graham had ever done that entitled him to any such classification.

His chief claim to fame has been in the field of affiliation with Communists and Communist-front organizations and that is certainly no evidence of greatness.

The defeat of Claude Pepper and Frank Graham has given the South a healthier and cleaner feeling.

Both would have persistently voted with Truman and against all other Southern senators except Estes Kefauver.

Both would, in our opinion, have voted for anti-segregation and the F.E.P.C. just as they did in the case of the District of Columbia.

Both would have voted against the Taft-Hartley Law and to give union labor racketeers unlimited power and unfair advantages over industries.

Both would have voted for deficit spending upon an almost unlimited scale.

George Smathers and Willis Smith will stand, shoulder to shoulder, with other Southern senators in defending the South against efforts to destroy its way of life.

The defeat of Frank Graham has, in no uncertain terms, told the country that the enactment of an F.E.P.C. law will place the electoral vote of North Carolina within the column of the States Rights Democrats.

The people of North Carolina took a sober second thought and decided against allowing Frank Graham to vote for them, in the United States Senate, for four years.

## A Liar As Often

Having predicted the re-election of Frank P. Graham to United States Senate and now trying to explain his error, Drew Pearson said in his column of July 6:

> Apparently they listened to the most vicious racial propaganda since the Civil War days—tons of literature circulated by Alabama Klansmen, anti-Graham propaganda mailed out under the franking privileges of Congressman Gwinn of New York, the friend of General Eisenhower, and the poisoned-pen diatribes of America Firster John T. Flynn inserted in the *Congressional Record* by Maine's Senator Owen Brewster, chairman of the Republican Senatorial Campaign Committee.

No literature whatever was sent into North Carolina by Alabama Klansmen and very little, if any, of the other literature described by Drew Pearson, was distributed by anyone.

This time, as often he is, Drew Pearson is a liar.

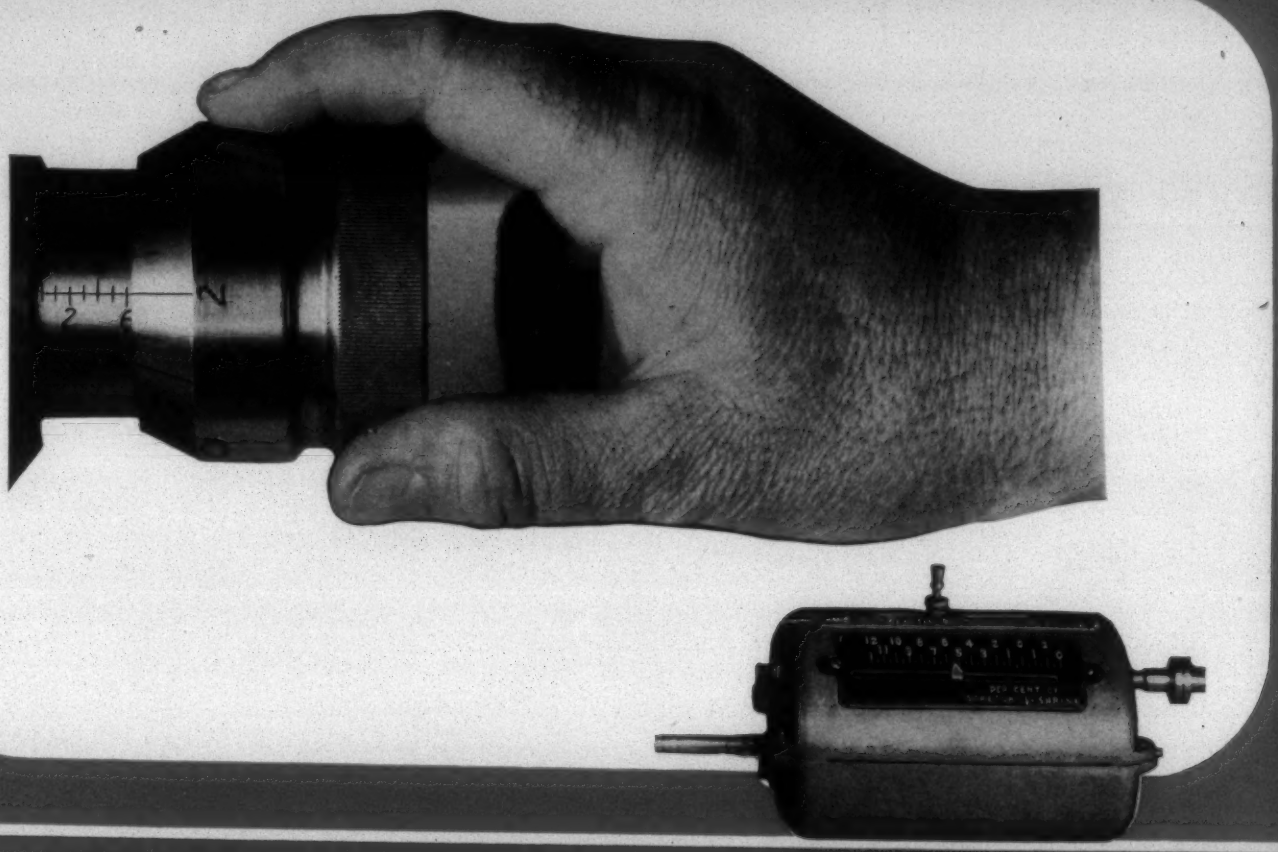
## Governor Scott's Prediction

The following is a statement made by Gov. W. Kerr Scott of North Carolina when he was in Washington, D. C., two days before the June 24 senatorial primary in North Carolina:

> Washington, June 22.—Gov. W. Kerr Scott of North Carolina predicted today that his appointee, Senator Frank P. Graham, would win the Democratic runoff primary Saturday by a margin of 35,000 to 50,000 votes.
>
> Scott also charged that Graham's opponent, Willis Smith, has the backing of the "States Rights" leaders of 1948, chiefly Dave Clark of Charlotte and J. E. Baker of Burlington.

Governor Scott was right about David Clark and J. E. Baker being active supporters of Willis Smith for the United States Senate but was wrong about the vote, for Willis Smith won the nomination by a majority of almost 20,000.

As far as we know, every 1948 States Rights Democrat in North Carolina voted for Willis Smith; in fact, we do not see how a man or woman could be in favor of preserv-



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Having provided for every need of efficient size application, drying, and handling of the warps, Johnson designers went still further to give practical and effective means of checking stretch, without need of stops for readings and calculations. Every stop during sizing can leave its mark on delicate warps and must be avoided for maximum sizing results.

THE PATENTED STRETCH INDICATOR, now standard equipment on Johnson Warp Sizers, records in percentages, on an easily read indicator, every fluctuation of stretch being given the warps while the machine is running.

THE FINGER-TIP CONTROL, by which even stretch can be maintained throughout the run of a warp or of a succession of warps, is operated by a touch on the calibrated control-knob illustrated above.

The operator can get as much stretch or as little as required, thanks to these precision instruments. Thus time, labor, and anxiety are economized materially, and quality is enhanced, in sizing warps the Johnson way.

This advertisement is a page from our new 16-page catalog describing fully the Johnson Sizer. Send for your free copy of catalog today.

*Charles B. Johnson*

**PATERSON** **NEW JERSEY**

Southern Representative

T. E. Lucas Associates, Inc.
Charlotte 1, N. C.

ing the reserved powers of the states and at the same time give Frank Graham a vote in the United States Senate.

## There Is Good News

Call us anti-union if you like, but we can't help gloating about the shellacking given the C.I.O.'s Political Action Committee in Floyd County, Georgia, last month. A comment from one hosiery and yarn manufacturer in the county: "As you well know this area has long been a hot-bed of the C.I.O. They concentrated a lot of talent and money in this area and wielded a lot of political pressure at all times. It took a long time for the complacent citizens of this community to realize the true status of C.I.O.-P.A.C. Finally we came to a showdown when the C.I.O. threatened to unseat Judge H. E. Nichols for sentencing their ringleaders in the Celanese strike. We have finally thrown off the yoke, and we hope it will be permanent." From the head of another textile mill: "We had a hot race here. A union sent in a great deal of money, and had men here from all over the country, but we won our fight, so I guess all the news is not bad."

Although Georgia was choosing Democratic nominees for the United States Senate, the governorship and lieutenant-governorship, the citizens of Floyd County were concerned chiefly with a superior court judgeship. Judge Nichols had had the nerve to put some vicious strikers in the clink, and the C.I.O. was out to get him. That was the sole issue. Judge Nichols had dared to insist that the rights of businessmen (in this case textile management) be protected; rather than sit back and moan about their poor lot, these textile plant officials got out and worked for the judge. It proves one thing—that business men still have some influence, if they just will use it.

## C.I.O. Admits Defeat

For several years the C.I.O. has been sending out newspaper stories claiming a large and continuous growth in the South.

On the other hand, TEXTILE BULLETIN has *repeatedly* asserted that the C.I.O. actually had less members in the South than when it began its "Million Dollar Campaign."

John Edleman, Washington representative of the C.I.O., and Isidore Katz, its general counsel, recently issued a joint statement from which we quote the following:

> Since the Taft-Hartley Law became law the union has suffered a net loss of at least 20 per cent of its membership in the South, while a number of long-established locals have been wiped out of existence, the T.W.U. officials stated. The whole effect of "Operation Dixie," the C.I.O. Southern organizing drive, has, therefore, been reversed, it was stated.

The above shows that the TEXTILE BULLETIN knew the facts and that C.I.O. officials have persistently lied about its growth in the South.

The union is trying to use its failure in the South as a means of assisting in the effort to repeal the Taft-Hartley Law, but the textile mill employees know that Taft-Hartley had little, if anything, to do with the union's failure.

The textile mill employees of the South have had no liking for George Baldanzi, William Smith and the others who have been drawing pat salaries out of the C.I.O. dues and decided that they would no longer be the goats. At the recent meeting at Boston, Mass., at which George Baldanzi was re-elected as vice-president by a narrow margin, it was announced tat his salary was $13,500. He also has a very liberal expense account.

John Edleman and Isidore Katz were very conservative when they admitted that the C.I.O. had lost 20 per cent of its members in the South. The loss was actually much greater if measured in the collection of dues.



GEORGE BALDANZI

Re-elected as Vice-President for the T.W.U.A. over the opposition of President Emil Rieve.

The report of the National Committee of the Communist Party meeting in New York, July 16-18, 1946, and published in the official Communist newspaper, the *Daily Worker*, said:

"The Southern organizing drive of the C.I.O. ranks in importance with the establishment of the C.I.O. itself and with the organization of C.I.O.-P.A.C. A successful organizing drive in the South will not merely mean the addition of hundreds of thousands of new members. It will mean a higher form of unity of Negro and white on the basis of a great advance in the economic, social and political position of the Negro people.

## A Letter To Employees

The following is a copy of a letter written by the president and treasurer of a Southern cotton mill prior to an election which was to determine whether or not the C.I.O. was to be the bargaining agent for the employees.

It is an excellently worded letter which meets all the requirements of the Taft-Hartley Law.

We suggest that this letter be clipped and filed and used by other mills when they are confronted with an election.

To All Employees of————Mills:

As you undoubtedly have already heard, the C.I.O. Union is claiming that it represents you and is your agent. We have insisted that the question as to whether this is true or not true be put to a vote or an election by secret ballot.

The Labor Board has ruled that this shall be done. So between now and this time next month such an election will be held—to give you the opportunity of voting by secret ballot as to whether you *do* or *do not* want this Union to come in here. As soon as the exact date of the election is set, you will be notified as to that and as to all the details of the voting arrangements.

This will be an important question for you to decide—important to you and to those who are dependent on you—important to your future here and the future of your family. That is the reason I am writing you this letter, in order that you may have before you the facts on both sides as you make up your mind about this matter.

I realize that this may look like a rather long letter. Nevertheless,

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I will appreciate it if you will take your time and sit down in your home or wherever you find it most convenient and give careful thought to the things I am going to bring out. And after I have said what I have in mind to say, you may be sure that I am not going to keep up any continual nagging on the subject, day after day, as the Union organizers seem to do.

I hope you will understand in the first place that we do not expect you, and we do not ask you, to do any favor for the Company on this matter. You should decide whether to vote for this Union, or against it, purely on the basis of *whether or not it will be to your own best interest.* If this Union were to come in here, would it benefit you or harm you? Would it be good for you or bad for you? Those are the only questions for you to decide.

For a good many months now the Union organizers have been here in Town, holding meetings, putting out circulars, visiting many of you in your homes, etc. Why has the C.I.O. sent these organizers here? Why are they after you? Your common sense tells you the answer. What they are after is—money—YOUR MONEY. They are here for what they hope to get from you in the form of Union dues. They certainly do not expect this Company to pay those dues. But they do expect to collect *from you.* They probably hope to get from you folks who work here approximately $50,000 per year.

Wherever this Union is voted in, one of the first things it demands is a "check-off." This, as you may know, is an arrangement by which the Union takes a slice out of every member's pay check before he or she ever gets its or even sees it. You should be considering whether you would like that or not. *That is definitely what the Union is after.* What they ask is that *you vote for them* and *then start paying them!*

These organizers have been living right well around here for several months and spending a good deal of money. Whose money have they been spending? Yours—they hope. They expect to get back from you all that they have spent and then some. The higher officials of this same Union recently admitted in the newspapers that they had spent six million dollars in the last several years and yet had fewer members than they used to have. All of that money—*six million dollars*—they got from the pockets and pay checks of working people, and they spent it all, and wound up with fewer members than they had before! Now they want *you* to start paying so that they can keep on spending.

And what do these organizers claim they can do for you? What do they say they will get for you that you do not already have? As for wages and earnings—they have not obtained any better anywhere else than what you are already getting. Your pay is up on the top level of the whole Southern textile industry and that is where we intend to keep it, up with the very best of all our competitors. Bear in mind:—The wage level in the Union plants is no higher than yours and when the people in those plants get through paying dues to the Union *they make less money than you do.*

When it comes to such things as vacations and vacation pay, holidays, Christmas bonuses, recreational and community facilities and various other similar benefits—all these you have as good and better than the Union plants, *without paying any Union dues to obtain them.*

With respect to your working conditions, we are continually taking steps to modernize the Plant in every way possible and to provide cleanliness, good lighting and up-to-date machinery and equipment throughout the Mill.

It didn't require any Union to get these things for you! It won't require any Union to keep them for you!

I do not mean to claim that everything is just as perfect at ————Mills as it might be. I do believe that things have been improved a lot here and we certainly hope to keep on improving them. And I would like to emphasize that if there is anything that you would like to call to our attention at any time, there is no reason why you should not do so and we will sincerely welcome your doing so.

Who do you believe is really more interested in your welfare—we who live and work here with you, or these men who come from somewhere else looking for Union dues. Do you know much about them? Do you even know who they are? I will name for you some of the men who run this Union:—Rieve, Baldanzi, Belanger, Chupka, Hueter, Jabar, Muscheck, Rosenberg, Rubenstein, Serriano, Stetin and Tullar. Where do you think these men come from? Are their backgrounds, their beliefs, their faith and principles anything like yours and mine? Do you think you would do better to follow them than us whom you have known and worked with through the years?

A few months ago the Union heard that some of the job-loads here were being changed. So immediately the organizers figured that all they needed to do was to come over here and preach "stretch-out" to you and promise you that they would make all the job-loads just right and that you would then vote to bring them in and turn everything over to them. Now the subject of work-loads is something that you are naturally interested in and entitled to know about. We want you to understand the truth and the whole truth about what the Union calls the "stretch-out."

Some months ago we had been falling behind in our business and losing out to our competitors because many of the jobs in this Plant were not properly set up. In order to stay in business and keep operating the Plant, it became necessary that we study our job-loads thoroughly in order to determine whether any of them were less than full jobs. We are trying to do this on a completely fair basis. We do not expect, and we are *not* going to require, anybody to carry more than a reasonable work-load. The whole reason why we go to the trouble and expense of having a methods and standards department is in order to work the loads out carefully so that all jobs will be set up equally and fairly instead of unequally and unfairly.

If we wanted to abuse our employees, we would not have waited until now to do it. It is not our purpose to tear this Mill down

## TEXTILE INDUSTRY SCHEDULE

— 1950 —

**July 27-28**—**COTTON RESEARCH CONGRESS**, Baker Hotel, Dallas, Tex.

**Aug. 18-19**—Summer outing, **SOUTH CENTRAL SECTION, A.A.T.C.C.**, Read House, Hotel Patten and Chattanooga (Tenn.) Country Club.

**Sept. 5-9**—Sixth **NATIONAL CHEMICAL EXPOSITION**, Chicago (Ill.) Coliseum.

**Sept. 11-13**—**SOUTHEASTERN PERSONNEL CONFERENCE**, Duke University, Durham, N. C.

**Sept. 11-13**—**SPINNER-BREEDER CONFERENCE**, Cortez Hotel, El Paso, Tex.

**Sept. 13**—Silver anniversary convention, **SOUTHERN COMBED YARN SPINNERS ASSOCIATION**, Cortez Hotel, El Paso, Tex.

**Sept. 19-21**—Textile division, **AMERICAN SOCIETY OF MECHANICAL ENGINEERS**, Worcester, Mass.

**Sept. 23**—**SOUTHEASTERN SECTION, A.A.T.C.C.**, LaGrange, Ga.

**Sept. 28-30**—Annual national convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS**, Wentworth-by-the-Sea, Portsmouth, N. H.

**Oct. 2-7**—16th **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

**Oct. 7**—**NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, S.T.A.**

**Oct. 12-13**—Annual meeting, **NORTH CAROLINA COTTON MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst.

**Oct. 16-20**—**NATIONAL SAFETY CONGRESS AND EXPOSITION**, Hotels Stevens, Congress and Morrison, Chicago, Ill.

**Oct. 16-21**—**INTERNATIONAL SILK CONGRESS**, New York City.

**Oct. 26-27**—Annual convention, **CARDED YARN ASSOCIATION**, Carolina Hotel, Pinehurst.

**Oct. 28**—**PIEDMONT SECTION, A.A.T.C.C.**, Charlotte, N. C.

**Nov. 4**—**SOUTH CENTRAL SECTION, A.A.T.C.C.**, Hotel Patten, Chattanooga, Tenn.

**Nov. 16-17**—Annual meeting, **TEXTILE RESEARCH INSTITUTE**, Waldorf-Astoria Hotel, New York City.

**Nov. 26-Dec. 1**—Textile division, **A.S.M.E.** (one-day session in conjunction with parent society's annual meeting), New York City.

**Nov. 27-Dec. 2**—**NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING**, Grand Central Palace, New York City.

**Dec. 9**—**SOUTHEASTERN SECTION, A.A.T.C.C.**, Atlanta, Ga.

— 1951 —

**Jan. 22-24**—Annual meeting, **NATIONAL COTTON COUNCIL**, Hotel Buena Vista, Biloxi, Miss.

**April 30-May 4**—**MATERIALS HANDLING EXPOSITION**, International Amphitheatre, Chicago, Ill.

**June 18-22**—Annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS**, Atlantic City, N. J.

**June 21-23**—Annual convention, **SOUTHERN TEXTILE ASSOCIATION**, Mayview Manor, Blowing Rock, N. C.

**Oct. 18-20**—Annual national convention, **A.A.T.C.C.**, Statler Hotel, New York City.

—1952—

**June 22-27**—Annual meeting, **A.S.T.M.**, New York City.


Mill No. 5


Mill No. 3


Mill No. 6


Mill No. 4

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THE LIST IS GROWING!

The roster of quality-minded, cost-conscious, well managed mills using Saco-Lowell Spinning continues to grow, as mill after mill realizes that a Saco-Lowellizing program is a *dependable approach to profitable operations.*

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but to build it up. We certainly know that we cannot build it up unless we get along with you people who work here. And we know that we cannot get along with you unless we treat you fairly and deal reasonably with you in all respects. No matter what any outside agitator may tell you, these are the principles which we try to live by, and which we intend to live by, in operating this Plant.

Are the Union organizers sincere when they talk to you about reducing work-loads anyhow? The truth is that as a rule *Unions mean not lower work-loads but higher work-loads.* If you will look into the job-loads at any of the mills where this Union represents the employees, you will find that they are practically all higher than the job-loads here—and that in most cases they got that way after the Union went in at those plants! Ask the organizers how they explain that.

The truth is that the Union has no magic power to make things go the way it wants them to go. Of course, it can promise anything but carrying out its promises is an entirely different matter. When the organizers tell you that they are going to come in here and make us do this or that or the other, they are seriously misleading you. If the Union were in here there would still be only one way it could try to force us to do anything that we were not willing to do and that would be *by pulling you out on strike.* And, without intending to seem abrupt, I do hope you will realize and understand in advance that this Company has no intention of yielding to any such pressure as that.

I am not saying that if the Union were to come in here, this sort of thing would necessarily happen. I certainly hope that it would not and we would certainly do our utmost to prevent it from occurring. I do know, however, that WHERE UNIONS ARE IS WHERE STRIKES GENERALLY OCCUR. Everybody knows that. And everybody knows that strikes mean trouble and dissension, strife and misery, lost work and lost pay. A Union often costs people more than just the dues it collects from them; it often costs them their whole earnings!

You may have been told that those who join and vote for the Union are going to get some advantages over other employees. I want you to know that this is absolutely untrue. Those who join or belong to the Union are never going to receive any preferred treatment over those who do not belong.

And you can bear this in mind also:—*It is not necessary, and it is not ever going to be necessary, for anybody to join this Union, or any other Union, in order to hold a job at————Mills. Anybody who tells you anything contrary to this is not telling you the truth.*

Now, if the Union were to come in here, who would be the people who would run it anyhow? A Union often furnishes an easy opportunity to persons who have a hankering for small-time politics. A few such people usually stir around in the Union, pull strings and get themselves set up as shop-stewards and committeemen so that they can handle everybody's affairs and "lord it" over all their fellow employees. Look around you and see who are the people who are active in pushing this Union. Are they persons whom you consider to be capable of handling your problems and into whose hands you are ready to trust your business and your affairs?

I hope that you will realize the importance of taking an active interest in this matter. You may have been told, or you may have the idea, that if you don't want the Union then you should just keep hands off and let those who do want the Union vote for it and bring it in here if they wish. Now that is a very misleading and mistaken idea. For if the Union should come in here, then it would represent those who do not want it as well as those who do want it. To illustrate this:—

There are approximately 1,500 people eligible to vote in this election. But if only 800 actually go and vote on the election day, then a majority of these 800 who vote, that is 401, would control the entire result. Thus if these 401 voted in favor of the Union, then the Union would represent not only the 401 and not only the 800 who voted, but the entire 1,500 employees in the Plant.

So when the election is held, you can see the absolute importance of everybody voting. Don't stand aside on the idea that the outcome won't affect you. It will affect you. Take a hand in the matter. Help make it go the way you want it to go!

I notice that in one of the Union circulars, they say that the Company has been trying to stall this election so as to prevent you from having the opportunity of voting. That is not the truth. The Company has insisted that you be allowed to vote on this matter. The Union asked us to accept it and recognize it as your agent and representative without any election. That we refused to do. And since we were not willing to recognize the Union without an election, we also were not willing for the Union to have the privilege of saying when the election should be held. Likewise the Union was urging that many people be not allowed to vote and we were insisting that everybody be allowed to vote, except superintendents, overseers, second-hands and people who work in the office.

All of those matters have now been passed upon and cleared up by the Labor Board and the election, as I have already stated, has been set and will be held between now and this time next month—unless the Union backs out.

In this election you will be free to vote entirely according to your own conscience and judgment—your own feeling and conviction—on the election day. *You can vote against the Union even though at some time or other you may have signed a Union card.* And the voting in the election will be, as I have stated, by secret ballot. You will simply mark a ballot either for the Union or against the Union and you will not sign your name in anyway. Nobody will be entitled to know, and nobody will know, how you vote.

I hope you will think carefully about all the things that I have tried to bring out in this letter. As matters now stand you have a good job at high wages, an up-to-date Plant to work in and a good community to live in. We all hope to make things even better. There is certainly no good reason to bring this outside Union in here, and pay dues to it, and at the same time run the risk of tearing apart everything that you now have.

In the light of all these considerations, I believe you will surely come to the conclusion:—*That you stand to lose if this Union were to come in here and that you stand to gain by keeping it out!*

Sincerely yours,

————————MILLS

President and Treasurer.

## Mooresville Workers Spurn C. I. O.

The C.I.O. Textile Workers Union of America took a real licking in a vote taken at Mooresville (N. C.) Mills on June 30. The vote was:

| | |
|---|---|
| For the mill | 1,676 |
| For the C.I.O. | 492 |

It appears to us that the National Labor Relations Board was very unfair in putting the mill and the employees to the trouble of taking a vote when less than 23 per cent of the employees were in favor of being represented by a union.




"Must be some kind of union drive on again."

# *For Quality*

## PIN TENTER FINISHING YOU NEED

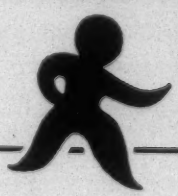
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Any percentage *uniformly deposited* from —5% to +35%.

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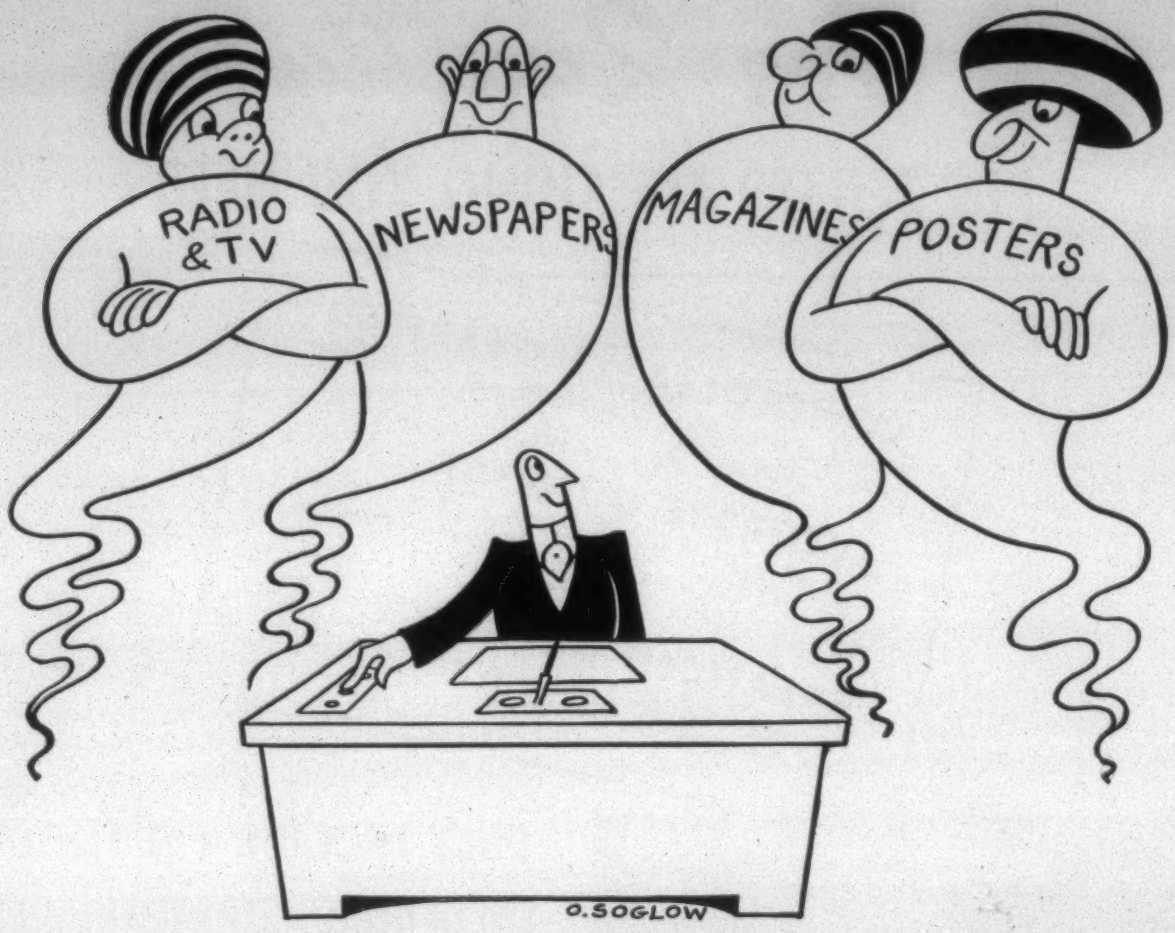
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Right now management has an unusual opportunity to gain employee-relations value from the high public interest these genii have created tor U. S. Savings Bonds. During the Treasury Department's Independence Drive, May 15-July 4, every major advertising medium has been used to broaden the people's interest in Savings Bonds as a means of building financial independence. Now, more than ever, as a result of this all-out campaign, your employees will appreciate the convenience of being able to obtain Bonds "automatically" via the Payroll Savings Plan.

If your company doesn't yet have the Payroll Savings Plan, now's the most opportune time for you to install it!

If your company does have the Plan, now's the time to remind employees about it!

Employees who pile up money in Savings Bonds feel more secure . . . are actually better workers. Moreover, Bond sales build a backlog of future purchasing power—good "business insurance" for all of us in the years ahead.

Payroll Savings is good for your employees, your business, and your country. "Push the button"—call in one of your top executives and appoint him Savings Bonds Officer. All the material and assistance he may need are available from your State Director, Savings Bonds Division, U. S. Treasury Department.

The Treasury Department acknowledges with appreciation the publication of this message by

**TEXTILE BULLETIN**

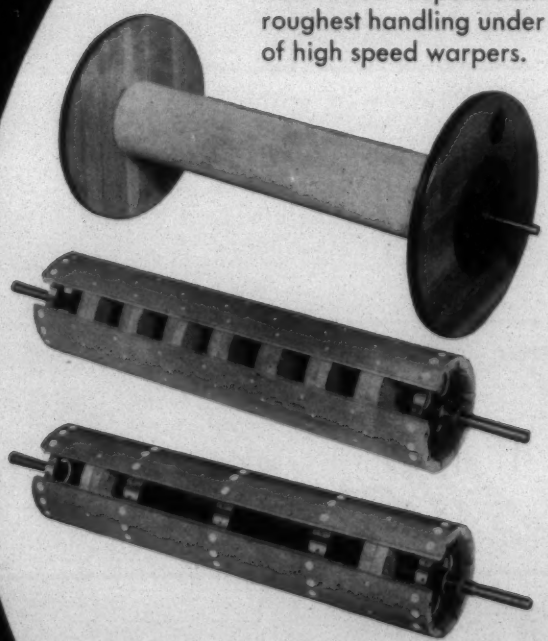
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**GK — COTTON**
With Improved Cast-iron Inside Supports at ends, and three two-ply wooden supports between.

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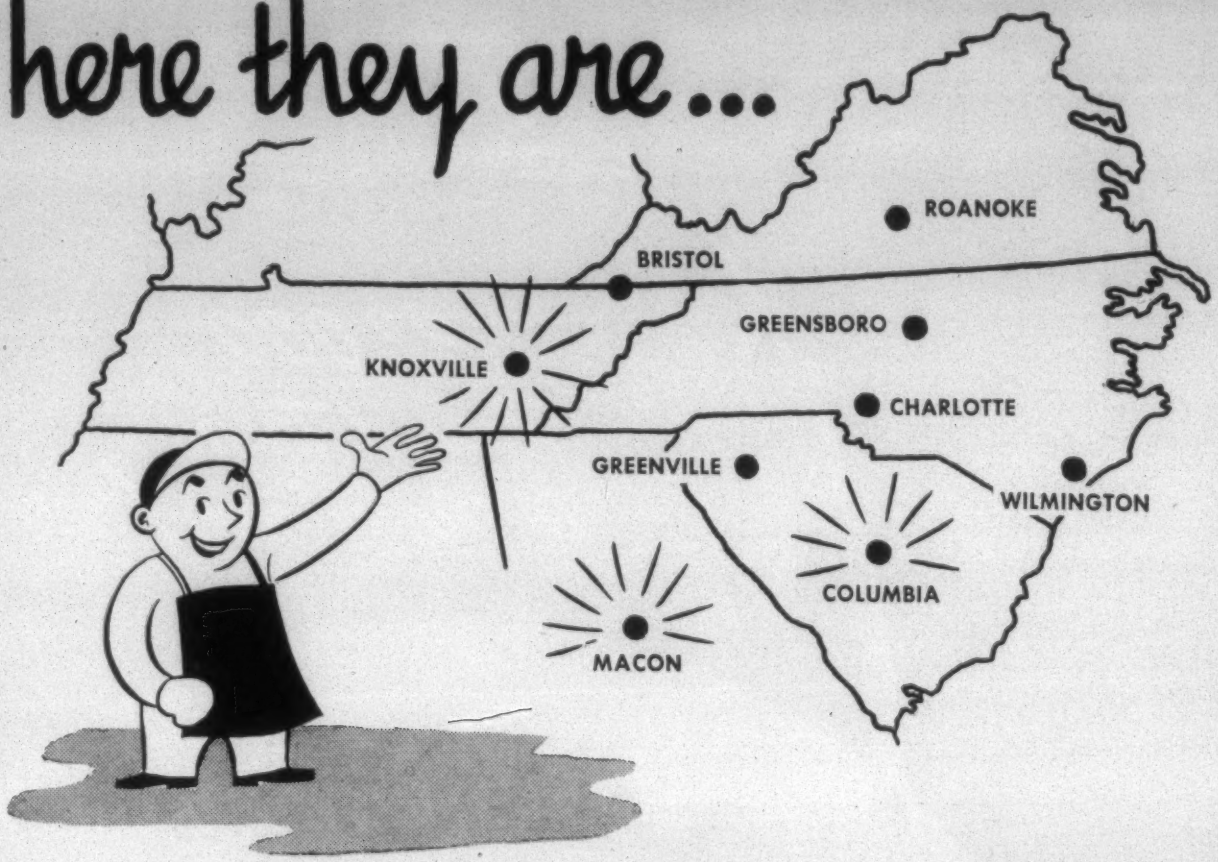
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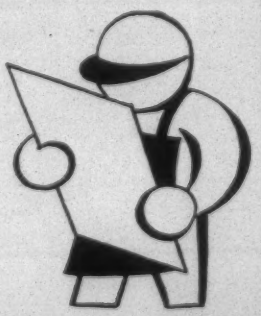
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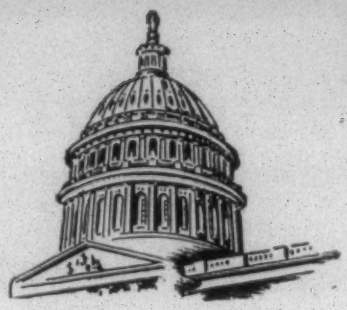
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# WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Business and industry will be brought under economic controls even tighter than in the last war if perfected plans of the Pentagon and Administration planners are put into effect in the Korean crisis. Under them the government will direct every phase of business and industry. So extensive are the controls that, in addition to priorities and rationing, the government will tell a corporation where a new plant may be built.

If war comes, industries and the consuming public will be subjected to the most drastic controls ever invoked in this country. Men, materials and credit will be "frozen;" farmers will be under equally tight controls. Big government will become paramount even in the choice of breakfast foods.

Government buying is stepping up fast, especially in metals and clothing. A military draft is ready, with a planned "freeze" of other workers in their jobs. Through the wage-hour law, the government is ready to step into virtually every factory and mill. The Pentagon has decided there'll be no more industrial concentrations like Pittsburgh and Detroit.

Truman leaders fear war-scare buying may soon produce shortages in basic materials, with the government bidding against consumers. They're moving cautiously, and not revealing the tight controls ready to be clamped on.

None of the armed services are ready for sudden war. The hard core of military resistance on land today are the Marines. A year ago the Pentagon hierarchy, with Truman's seeming approval, was threatening them with extinction. It was a move to assure the Kremlin of "peaceful intentions."

Armed services had no forewarning of "Red" attack in Korea. Truman was caught flat-footed; rather than acting decisively, he jumped quick to avoid a debacle almost equal to Pearl Harbor. Korea had been written off as the spot in least danger of "Red" attack.

Senators questioned Pentagon officials and learned, in small bits, that of $10,230,000 provided last year for Korean defense, $200 worth of materials had been delivered. They admitted Korea was at the bottom of their list of nations to get arms from this country.

Legislative plans for tax reduction this year have been thrown out of gear by the Korean crisis. Any reduction is uncer-

tain; it's more certain that a heavy excess profits tax on corporations will be sought next year.

Truman will resist any tax reduction, pleading the Korean crisis, and a veto seems certain. The House is not expected to overturn a veto. The Senate is dissatisfied with the House-passed bill. New military spending of about $2 billion is in sight.

No matter how the Korean crisis ends, the government is going into its heaviest peacetime rearming effort. Some industries are being told now to enlarge their productive capacity. This will require government financing, and probably priorities for materials.

Truman officials are moving fast to forestall political effects of the Korean attack. Even if the attack folds up, they'll guard against any evidence of recession as the election approaches. This can lead to tight priorities and controls before the Summer is over.

R.F.C. may develop into one of the government's worst scandals. Facts are being turned up by the Senate Banking and Currency Sub-committee. Loans have been made sometimes for no other reason than that a New Deal senator or House member urged it. "Small loans" may be a rathole through which federal millions will be lost.

Strange loans turned up by the sub-committee include $18,500,000 to G.O.P. Chief Gabrielson's synthetic gasoline plant. Details of the financing are so intricate the senators had difficulty in grasping them, but Gabrielson says it's all right.

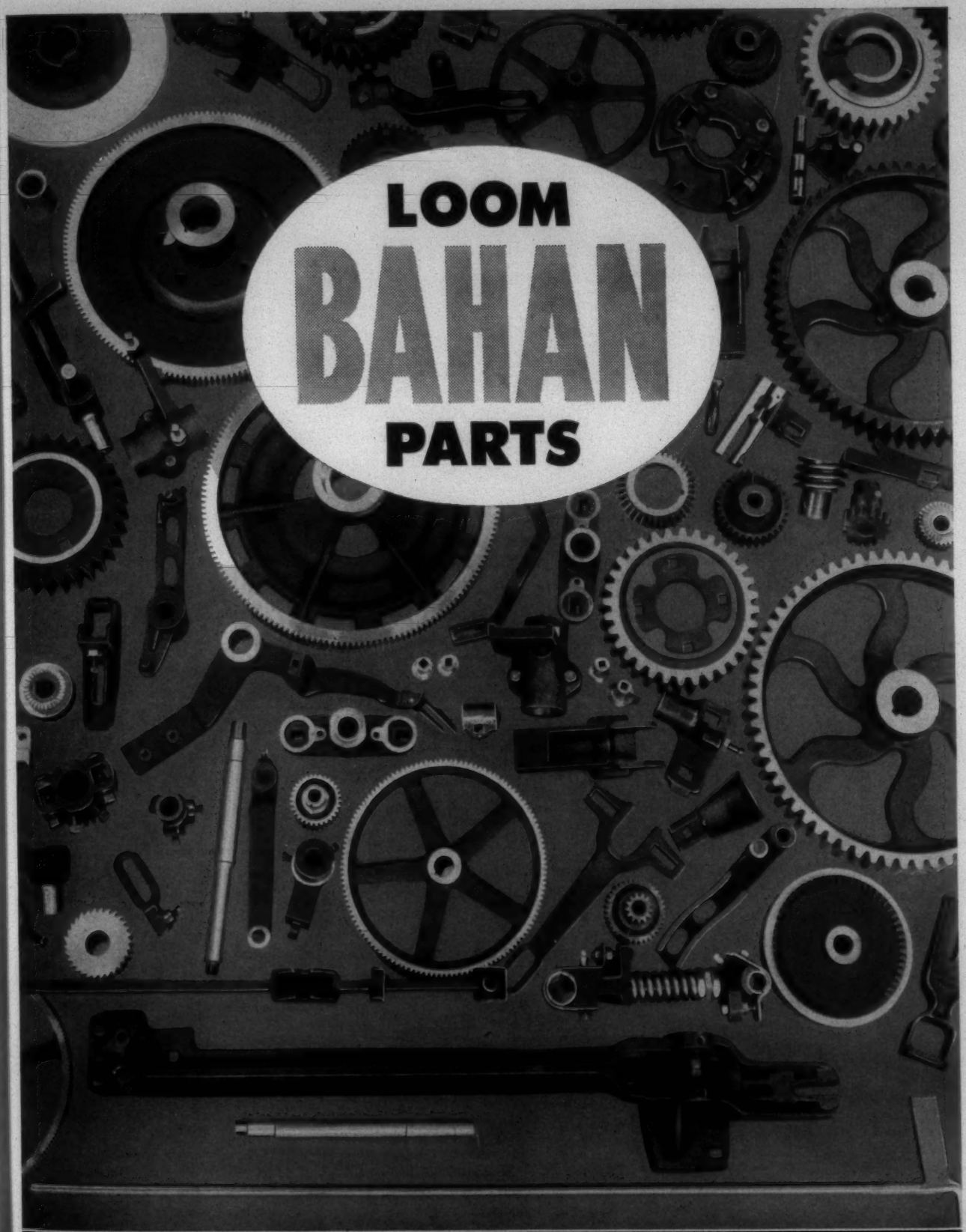
Early basement-to-roof housecleaning of G.O.P. national headquarters is being discussed by Republicans in Congress. They call it a subsidiary of the New Deal, packed by some of its most ardent admirers.

Just how Truman forces managed to pack the G.O.P. set-up, if they did, cannot be explained by Republicans in Congress. But they say every plan for aggressive action in this year's campaign has been cold-shouldered into the waste basket. They now call Gabrielson's "fusion" plan for the South an adroit Truman move.

Medical and hospitalization plans will be pushed to the front by unions in wage negotiations next year, supplementing pension plans of last year. This move is a forerunner to reviving nationalized medicine as a prime political issue in 1952.

Proposed economies in government spending next year are fading rapidly. Military spending will increase by two to five billion; there will be few curtailments in any government branch. Senators and House members fear a charge of crippling the national defense.

Non-segregation provisions are being written into contracts for government materials for military use. The claim is that this conforms to the ban on segregation in the armed services. It will be stretched further as government buying increases.




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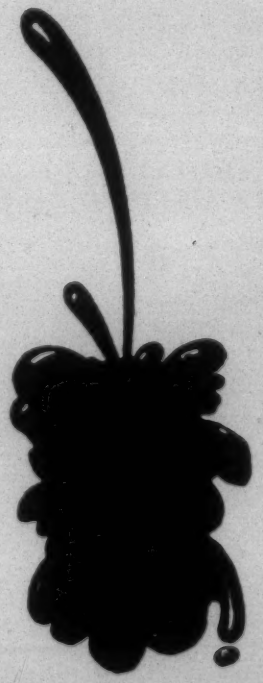
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**CHARLOTTE, N. C.**

textile bulletin

VOL. 76 JULY, 1950 NO. 7



# TEXTILE INDUSTRY PRESS RELATIONS

TO promote better relations between the press and industry and thus better relations between the public and industry, the Textile Committee on Public Relations has published a manual entitled "Press Relations." Prepared by Lawrence McCracken of Dudley, Anderson and Yutzy (551 Fifth Avenue, New York 17, N. Y.), the manual presents a digest of the answers given to the problem of press relations by the two sides most concerned, the press and industry.

McCracken queried more than 100 editors and reporters asking them to tell frankly how they got along with industry, how industry could get a better press, what news they wanted and would print, and what criticisms or suggestions they would offer to management. On the other side of the fence, a score or more industries with good press relations were written letters asking how those relations had been achieved. Specific suggestions were requested as to how others might achieve the same understanding with newsmen. The answers came thick and fast from both sides, and Mr. McCracken has organized them into nine sections in his manual.

## Availability Makes for Goodness

The first section, "What Makes Good Press Relations," points out that management often doesn't "realize that the newspaper must serve the whole public—it can't tell just one side of a story. . . . Industry should understand that an honest newspaper can't be used as a private propaganda tool for any special interest. . . . Industries should voluntarily let the public in on their troubles more often. Not long ago, an electric power company executive told me he never failed to gain public co-operation when power was tight if the consumer was told in a straightforward manner about the situation." A New Jersey editor explains press relations simply: "A responsible daily newspaper deals in only one commodity—news. Whatever agency helps its editors and reporters obtain news accurately, completely and swiftly, they appreciate. Whatever agency blocks their obtaining the news accurately, completely and swiftly, they resent. Press relations are as simple as that."

## Just What Is News?

In discussing "What Makes News," the manual points out that plant activities touch the lives of the people of the community at many points and thus are of a direct and vital interest to newspaper readers. Newsmen reported special interest in such activities as: development of new products and what difference they will make; plant expansion, why and how employment will be affected; institution of new employee practices such as paid vacations, pensions, awards, etc.; promotions and changes in the executive team; development of new safety techniques; institution of sales promotion campaigns; reports on the company's current financial situation; introduction of new machinery and what difference it will make; layoffs or production reduction and why; company parties and picnics; accidents; and retirement of veteran employees. Also, any human-interest incidents that might have occurred are always interesting to the newspapers.

## Delivering the Commodity

The manual mentions a few simple rules which newsmen, hurried by deadlines and constantly fighting time, appreciate having industry follow. Briefly, some of them are: provide newsmen with the name and phone numbers of an executive of sufficiently high authority so that he can answer questions and give news without waiting for higher approval; the reporter appreciates the confidence of the company and rather resents having to submit articles for approval before publication; reporters, forced to judge news as news, expect co-operation in getting bad as well as good news about the company; industry's interests are never served by a blunt "no comment" that gives no explanation and it is a rare and soon-to-be fired reporter who will betray a confidence; a reporter who has found an "exclusive," or a story that he has gotten on his own initiative, expects that story to be printed first only in his paper, and plant officials should not telephone it to all the papers; personal acquaintance with the reporter is a big help since he is the one who writes the story, not the editor or the publisher.

## And Bad News

In the section, "How About Bad News," McCracken brings home the fact that attempts to hide unpleasant news have usually resulted in more bad publicity than straightforward "bad news" releases ever do. As an illustration, he cites the attempt the Air Force made to cover up a crash early in World War II, and how, as a result, the news was dragged out for days and days with resulting suspicion of the Air Force. On the other hand, when a Swift & Co. plant

at Sioux Falls, Ia., exploded in 1949, the company gave every assistance in reporting the accident fully. As a result, reporters saw and emphasized in their stories the company's intelligent, humane, and efficient handling of the tragedy. One wire association writer commented: "One of the most successful public relations men I know was the first, to my knowledge, to offer bad news as well as good of his own free will. Often we heard of some bit of bad news at his firm before the rumors started—we heard it from him directly. The result is that he enjoys the confidence and respect of everyone and his forthrightness has paid many dividends to his company—very large ones."

### They Didn't Use It!

"If Your News Doesn't Get Printed," the manual points out that that shouldn't discourage the release of news, for editors ask "that the copy keep coming to them." They really want to use as much of it as they can. For instance, 78 per cent of those editors queried said they wanted unsolicited material. "Although they always have more quantity than they can possibly use, they're always seeking quality." If a plant release is shortened or omitted, it probably means a lack of space. This often occurs on a day when a big story breaks and much excellent material has to be discarded to make room for the overwhelmingly big news.

### Industrial Advertising

In the section, "What About Advertising," McCracken brings out various suggestions for industrial advertising. Editors, although they resent any offer to swap advertising for a little "free publicity," do appreciate their advertisers, for ads are their "bread and butter." And advertising not only improves press relations, but helps to build understanding between a plant and its employees and the community. "For instance, a Massachusetts mill runs advertisements in its local newspaper featuring various employees on their jobs. This has fostered pride of employees in their jobs and enhanced prestige of textile workers in the community with the result that the plant finds it has the pick of the current labor market. . . . Rather than publish its own house organ, one Maine company purchases a page in its local newspaper in which it runs news about its workers in the style of an employee publication. The paper finds this an excellent feature because the page is newsy and the workers like it because news about them is more widespread."

### Pictorial Coverage

"What About Pictures" suggests that when a photographer is engaged, it is best to hire a man who has had news photography experience. Often commercial photographers don't realize that editors want action shots, or at least shots that suggest action. Also, editors want glossy 8 x 10 photos which are glossy, technically well exposed, and sharply focused. Pictures that arrive several days after the story has been printed have lost interest and are no good.

"Radio Stations Want Your News, Too," whenever it is released to newspapers. Releases may be sent them in the same manner they are sent to the papers, and they should be given the same facilities for collecting the news that are given the papers. In addition to news departments, radio stations maintain special events departments. They are interested in such activities as company parties and entertainments, open house programs, dedications of new plants, banquets and other events which they might broadcast.

The last section in the manual is entitled "A Study In Contrasts," and it consists of letters from two editors in different cities. On the one hand, the editor was enjoying good industry-press relations with many of the features which the manual had stressed throughout. On the other, the editor had experienced, especially in the past, the unenlightened attitude of hostility between mill and newspaper. Both letters did much to clarify what the manual had stressed throughout.

# Fight Your Invisible Competitor—FIRE!

By P. C. HENSLER, Fire Protection Institute

SEVEN million dollars is a tidy sum—even in these days of inflated figures. Yet seven million dollars is the sum recorded for the textile industry's contribution to one of its biggest invisible competitors—fire!

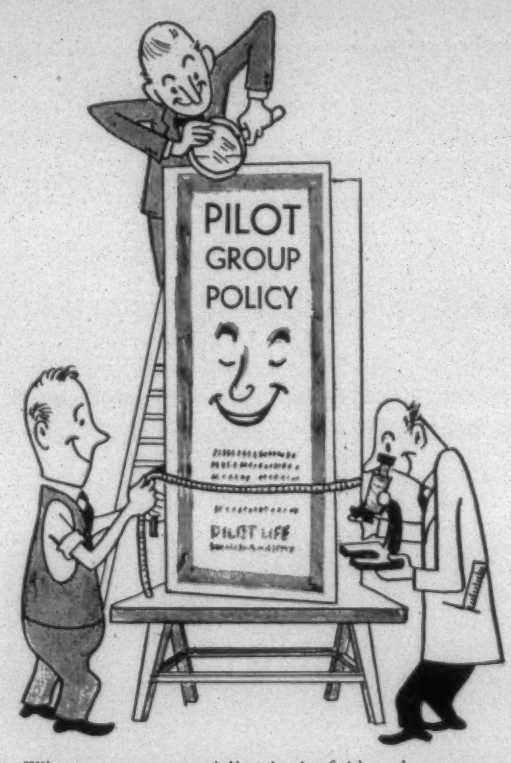
Fire safety experts throughout the country believe the current annual fire loss in the textile field can be reduced substantially through better trained plant personnel and increased "know-how" in the use of dependable "Underwriters-approved" fire protection equipment. These fire safety executives, following analysis of reports of recent costly fires in the industry, forecast increased emphasis on private fire brigades in American textile mills.

Four thousand textile mill fires were recorded during a recent typical 12-month period. These 4,000 fires were the outstanding ones, the ones recorded by the fire chiefs and fire marshals. Fire safety officials estimate that a substantial number of small fires are never tabulated in year-end fire loss totals because they are extinguished with negligible damage. These textile industry fire losses are part of an appalling national pattern. As suggested by the frequency of fire losses in the textile industry, a great deal remains to be done in terms of both fire prevention and protection.

These two terms are not synonymous, but both aim at reduction of loss of life and property as a result of fire. Fire prevention advocates concentrate on avoiding outbreak of fire by stressing the need for fire-resistive materials and "good housekeeping" practices in business and industry, and in homes and on farms. These basic objectives are supported by fire protection experts, but they also point out that many small fires can be controlled and extinguished with relatively little damage through more effective use of Underwriters'-approved fire extinguishers and other fire fighting equipment.

Textile plants may vary in constructional features, but good construction is a fundamental need in a fire-safe building. Processing plants can be divided from storage by means

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Addition of this new style metal roving and filling boxes enlarges the field of FISHER FUNCTIONAL TEXTILE TRUCKS. It also permits Truitt Manufacturing Co., of Greensboro, to expand their own stainless steel program—a happy arrangement for two firms who have long been good friends.

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## FISHER MANUFACTURING CO.

MATERIALS HANDLING EQUIPMENT. TEXTILE

BOX 244 -- HARTWELL, GEORGIA

of various types of cut-offs, and when necessary, can be subdivided by additional fire doors and cut-offs.

Since it is the most combustible item of the textile family, precautions to prevent ignition in processing cotton can be geared to match the risk. In those stages of picking and carding where the possibility of fire due to foreign matter is great, a high degree of fire protection can be concentrated to avert fire. Approved fire extinguishers can be stationed in prominent places for use in emergencies.

Every cotton mill operator is aware of the hazards inherent in accumulations of lint. The best known and most effective means of eliminating this hazard is to rid the plant of lint accumulation. By using vacuums and blowers, lint can be disposed of as often as necessary. Dust explosions have been responsible for a series of disasters involving years. Where this hazard exists, good housekeeping is essential. Well-designed equipment reduces necessary cleaning, but it is not always possible to maintain absolutely tight systems. A great deal of labor can be eliminated by applying suction at locations where dust may escape and conveying the aspirated dust to safely located collectors.

It is wise to eliminate all sources of ignition because many dusts can be ignited by very low energy sparks. In view of the fact that 30 per cent of all the fires which ravage the nation yearly are caused by careless smokers, the wise plant operator will make the regulation of smoking his prime concern. The safest procedure, of course, is to prohibit smoking on the factory floor.

Many plants provide workers with "smoking rooms" to eliminate so-called "sneak smoking" in danger areas. These rooms not only solve the smoking problem, but also do much to build good will by giving employees a few minutes relaxation from their day's work. In all cases, enforcement of smoking rules should be strict since valuable property and, sometimes, the lives of the workers depend upon it.

Regular inspections of electrical motors, cords and circuits by qualified experts should also be included in proper plant maintenance. Electricity plays an important part in contributing to fires in textile mills. Switches and electrical fixtures can be encased in dust-proof housings to prevent escaping sparks from defective connections. Employees are encouraged to report promptly any trouble spots, overheating or defects as soon as they are discovered. Repairs should be made as promptly.

More and more American plants are realizing the work of well-organized and specially-trained industrial fire brigades set up in an effort to curtail the number and cost of destructive fires. It has been estimated that 90 per cent of all fires in industry can be prevented and that most of the remaining "unavoidable" blazes can be checked by private brigades with minimum property losses. The need for an adequate suuply of "approved" extinguishers and for personnel familiar with their operation cannot be over-emphasized.

Safety officials point out that there is a place for both municipal departments and fire brigades to help safeguard all industrial plants. The private brigade can be an important factor in safeguarding lives and property until the public fire department arrives on the scene. The basic objectives of brigade programs are:

(1) To train personnel in sound fire prevention habits.
(2) To familiarize employees with various types of Underwriters'-approved equipment and how to use them.
(3) To minimize panic in the event of fire by assigning specific responsibilities to brigade members.
(4) To encourage excellence in fire brigade performance through a continuing program of brigade competition.

Listed below are nine important general rules of fire safety which are particularly pertinent to the textile industry:

(1) Obey "No Smoking" signs.
(2) Break matches before throwing away.
(3) Use lamps and fuses of proper sizes.
(4) Organize and train an employee fire brigade.
(5) Store materials in small piles.
(6) Keep aisles clean and clear.
(7) Make sure motors and generators are well lubricated.
(8) Know how to call fire department.
(9) Dispose of trash, oily rags and flammable compounds promptly.

Is your plant doing its best to keep fire from crippling business? If your plant is constantly on the alert for potential fire hazards and you are adequately provided with fire protection equipment bearing the seal of the Underwriters' Laboratories, you are well on the road to operating a fire-safe plant. Only those who have seen smooth-flowing production halted by destructive fire can realize the long hard climb to again reach peak production.

***EDITOR'S NOTE*—Although "Son" is a more recent textile school graduate than "Dad," the boy will admit that poppa knows best when it comes to the technique of running a cotton mill. Before straightening out the fiber, they will first straighten out the opening room.**

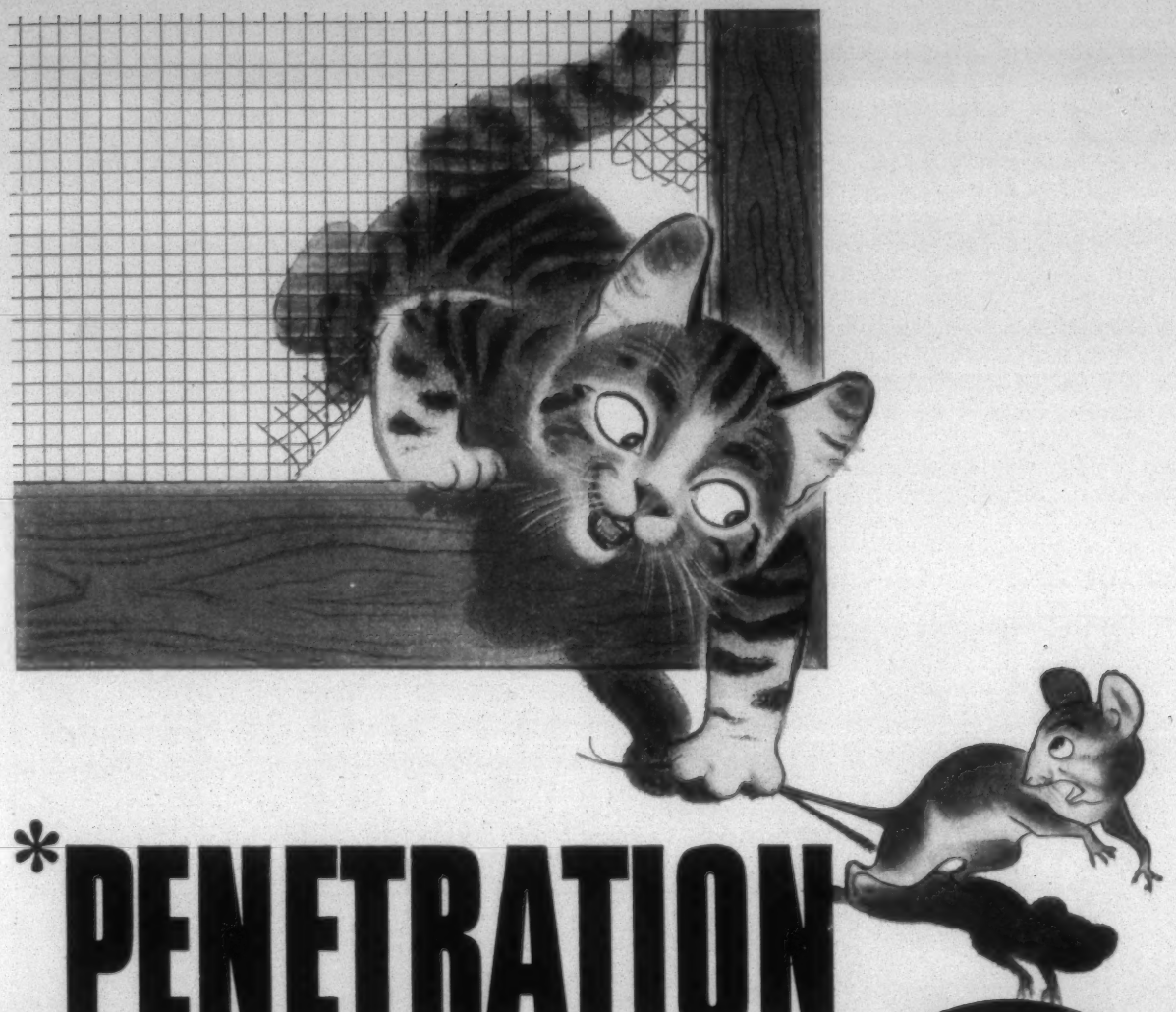
# *Dear Son—*

YOUR question in last letter about a "best" opening room intrigues me. There are as many "best layouts" as there are mill men. I don't believe there is any such thing as a "best" opening room. Most opening rooms are a compromise on location, floor space, kind of cotton and pounds per hour. Few, if any, have ideal conditions on all three counts.

In their original layout almost all of these opening rooms did a good and excellent job for the purpose they were originally designed. As time passed, price of cotton changed, pounds per hour have been stepped up and most opening rooms are not doing the cleaning they originally were designed to do.

You say your mill is running S.L.M. 1 1/32nd cotton and being processed on the pickers at rate of 400 pounds per hour 100 per cent. You say you have six pickers all fed by one rake distributor with one line of opening feeding the six pickers. This means you have 2,400 pounds per hour going through your line of opening. Well—that is too much.

To begin with, I would suggest two separate lines of opening, both feeding three pickers. By doing this you have



# *PENETRATION

Peak production . . . without worry of breakdown due to friction and wear . . . is made easier with Tycol high quality greases.

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Call your nearest Tide Water Associated office. Let them suggest the Tycol grease best suited to your needs . . . and remember, Tycol green cast greases are made from high quality cylinder stock and well refined neutral oil, with a minimum of soap — a maximum of oil . . . more efficient lubrication per pound of grease.

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a definite advantage in that you can run two different mixes through simultaneously. Also, you will have a definite advantage in case of fires and maintenance. In each line of opening, I would suggest six totally enclosed blending feeders running dust exhaust fans; fans exhausting into an air filter. These hoppers will feed on to a feed table into a vertical opener; the stock passing over a magnet before entering the vertical. This magnet will pay for itself many times over in preventing damage to grid bars, screens, rolls, etc. as well as reduction in fires. Next in line a No. 6 Air Filter into a No. 12 lattice opener with a No. 11 dust and leaf extractor. Next in the line, I suggest a Superior cleaner. You will note that we have used air filters and eliminated the use of a dust pit. I am convinced that dust pits are no longer necessary and their use is as obsolete as two and three-process pickers.

Many mill men will disagree with the vertical opener in the line, but if a vertical opener is operated properly and if the stock is opened properly before being presented to the vertical, it is a very good cleaning machine. You notice we have suggested the six blending feeders. That means they will be operating at 200 pounds per hour. This low pounds per hour means that the machines can be set very close, which insures a thorough breaking down of the large lumps of stock which in turn allows the sand, dust, leaf and motes to be removed easily. Also, this low production insures the stock being presented to the vertical in a highly fluffy state—which is a "must;" 500 r.p.m. to 550 is a good beater speed for a vertical to operate. Also another "must" is have sufficient suction to remove quickly the stock from the vertical opener.

As for the number of bales to a mix, I go up to 40. After 40 I do not believe the cost per square foot of floor space is justifiable. It is important that the proportion of each grade and kind of cotton be the same in each mix. A little care at this point will do much to give improvement in break and smooth running of the work from day to day.

One other suggestion—let's put sufficient light and heat in that opening room. Make it a place that can be kept neat and orderly. By doing these very simple items, you will find that your opening machinery will be well kept rather than the most neglected area around the plant.

I am sending you a diagram of the layout. This sketch is not drawn to scale.

B—Enclosed hopper
D—Feed table
F—Air filter
F—Arrangement of pipe from hopper to fans to filter
G—Magnet—either permanent or electric (the permanent magnet is simpler)
H—Vertical opener
L—Air filter
K—Lattice opener with dust and leaf extractor
N—Condenser
O—Inclined Superior cleaner

Son, this arrangement will not please everyone. Other mill men will have different ideas, but with the suggested one, you will get well opened, clean stock, with a minimum injury to staple.

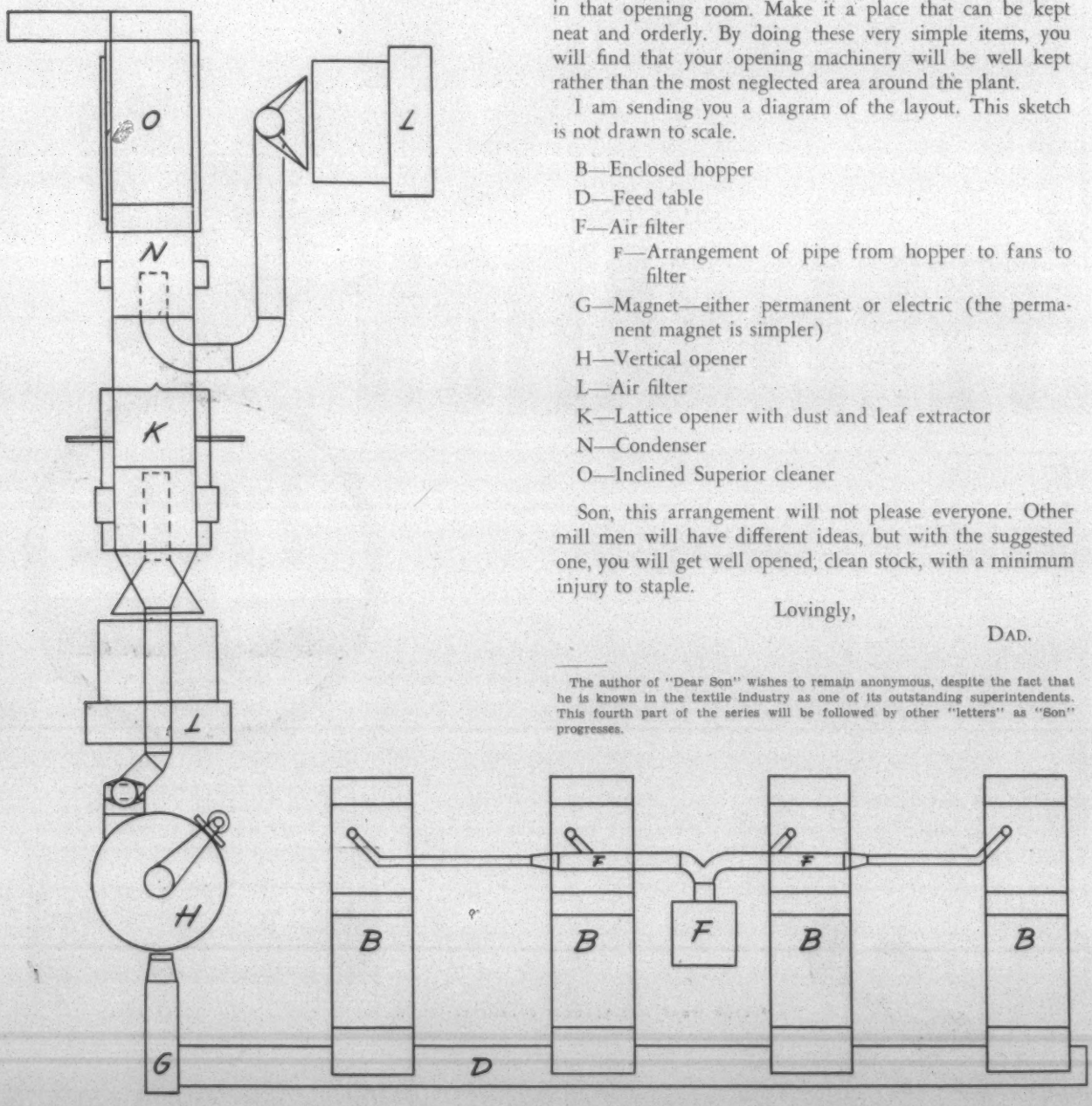
Lovingly,

DAD.

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The author of "Dear Son" wishes to remain anonymous, despite the fact that he is known in the textile industry as one of its outstanding superintendents. This fourth part of the series will be followed by other "letters" as "Son" progresses.

**This is the opening room layout that "Dad" has suggested to "Son."**



Custom Cut

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SILENT CHAIN DRIVES

•

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SPROCKETS
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*Write For Stock Sheet on Gears*

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Other Metron Tachometers in single- or multiple-range hand types; fixed types with single or multiple heads.

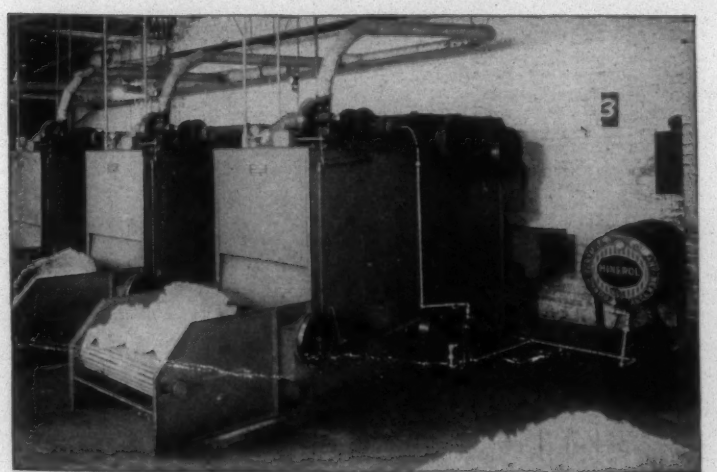
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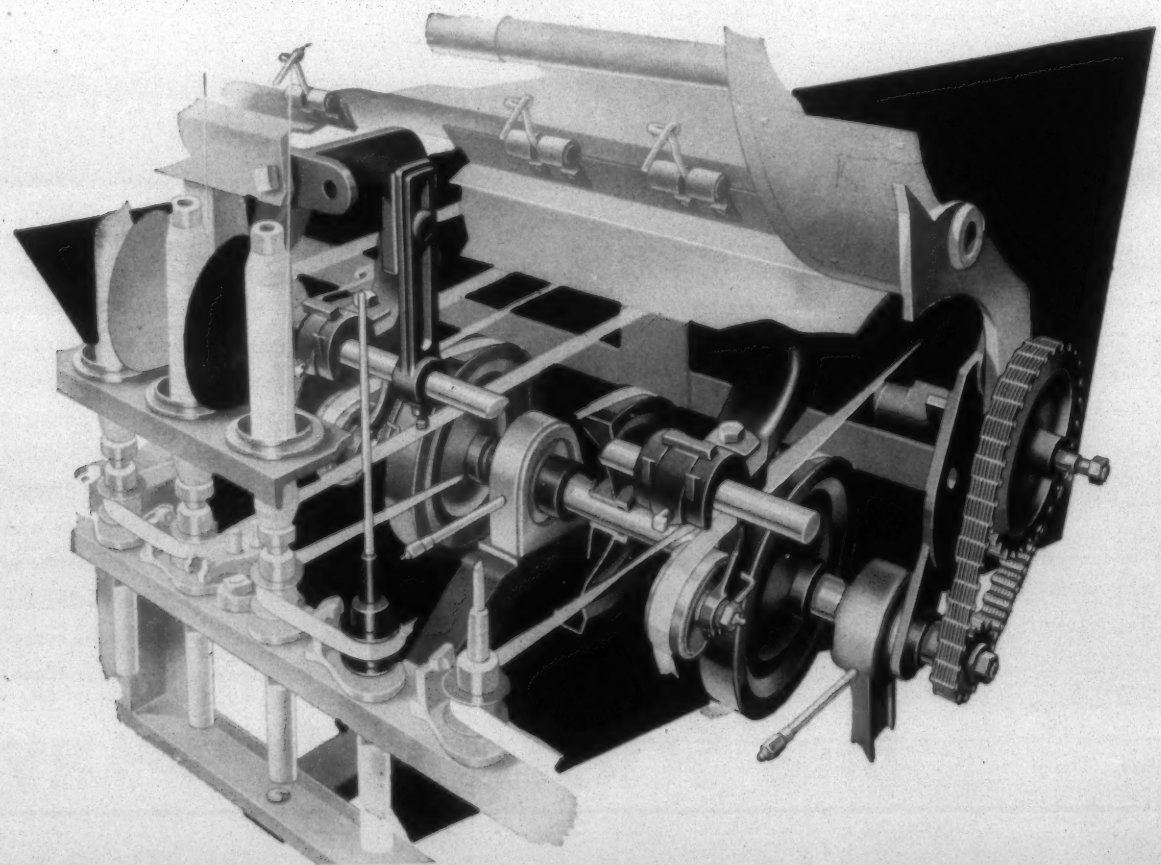
# 8,000,000 SPINDLES
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Your present frames, either band or tape driven, can be made competitive with new frames by rebuilding with Meadows Conversions and equipping with Meadows Pulleys. This Conversion includes silent chain drive, ball bearing jack studs, individual driving pulleys, high-strength ground and polished shafting (mounted on heavy-duty ball bearings), and ball bearing tape tension pulley assemblies . . . Don't let old equipment pull down production and profits another minute! Investigate the possibilities of *modernizing* with Meadows Conversions.

*We engineer and service each installation, design and manufacture all parts. We will be glad to have a representative survey and estimate your frames without obligation, within their territories.*

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THE CHINA GROVE EXECUTIVE STAFF—*Left to right*, Secretary and Treasurer Carl J. Beaver, the late Superintendent Everett M. Cushman and the present Superintendent Sam R. May, Jr.

# China Grove Cotton Mills' Plant No. 3—Engineered & Built For A Specific Job

By DAVID CLARK, Editor

WHILE it is not entirely new, having been built in 1946 and 1947, Plant No. 3 of China Grove (N. C.) Cotton Mills Co. is one of the best and most efficient manufacturers of combed thread yarns in the United States.

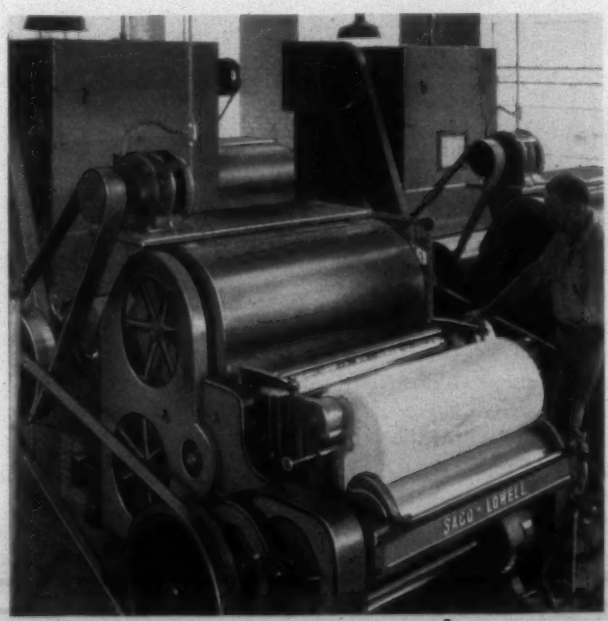
China Grove Cotton Mills has long been noted for the high quality of its combed yarns and has been very successful under the management of Carl J. Beaver as secretary and treasurer and the late Everett M. Cushman as superintent. Mr. Cushman was an exceptionally fine manufacturer of combed yarns; in fact, we doubt that he ever had a superior in that line in the South. When he passed on about two years ago, he was succeeded by Sam R. May, Jr., a graduate of the School of Textiles at N. C. State College. Mr. May had been carefully trained by Everett Cushman to become his successor and has carried on in a very worthy manner.

China Grove Cotton Mill No. 3 was built for a specific purpose: to furnish combed thread yarn to a trade which had formerly been supplied by a New England mill. The management of China Grove, in making plans for Plant No. 3, determined to make this unit modern, efficient and economical in operation through the use of every possible means, but to do nothing which would have the slightest harmful effect on high-quality standards.

After many hours of study, the management decided that the new plant would be housed in a modern steel and brick structure with a wooden deck roof (gravel and tar with cork insulation). There are side walls of masonry, with steel sash, glassed with Thermopane in the openings. The first floor is topped with hardwood laid over tar and rock concrete. Humiducts in each department are used to maintain a stabilized atmosphere; humidity is controlled within narrow limits to assure proper regain and a good-running job.

The equipment used consists of two new all-steel one-process pickers with blending reserves and return air filters. There are 70 Saco-Lowell 40-inch cards followed by one passage of four-roll drawing which, with two 10½-inch lap winders, make up the pre-combing processes. There are then 12 Saco-Lowell high-duty combers with a four-roll Universal draw box. After the combers there are two nine-inch lap winders and a line of controlled draft drawing to assure thorough blending and a low percentage of variation. The combed drawing sliver is then processed in two roving stages, the first stage using a 10x5 Model FS-2 Drafting assembly and the second using the conventional 8x4 roving frame.

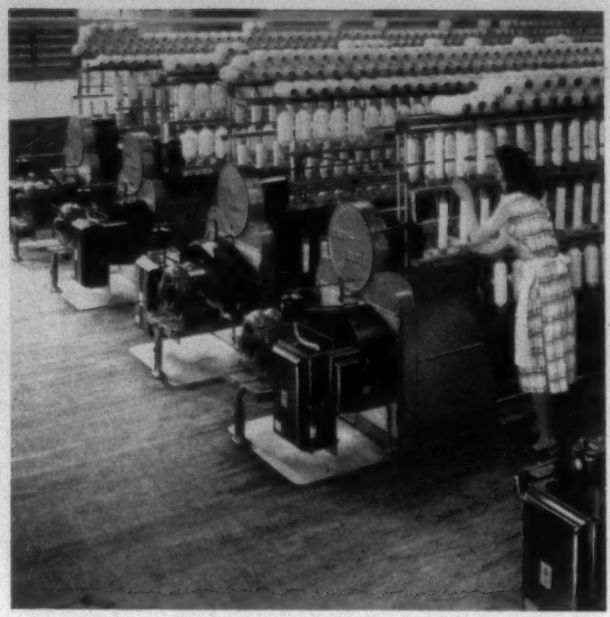
In the spinning room there are 15,120 spindles equipped with the single-apron long draft unit which was adopted because very close investigation was convincing that the single-belt system had ample drafting capacity and the necessary fiber control to assure the quality of yarn required at a minimum of invested capital in drafting units. The counts of yarn and the rovings produced established a condition of drafting well within the range of the single-belt system in every respect. The spinning frames mount 252 spindles, are built to a 3.75 gauge with a two-inch ring, and the traverse is eight inches. These frames are equipped with new steel ten-inch cylinder and with the McMullan wooden-




One-process picker with No. 5 filters.



A view of the plant's card room.



Roving section at China Grove No. 3.

sleeve spindle. The creel is two stories high for double roving.

In the spooler room there are ten Saco-Lowell Model 5A spoolers with 140 spindles, each built on a five-inch gauge and a six-inch traverse. In the twister section there are 24 Model BA 39 frames with 384 spindles each. The twisters are equipped with rings to correspond with the various counts in process. Lestershire spools were being used.

Mill No. 3 is equipped with the Bahnson system of humidification. The cards have Abington strippers. The quality control room had Saco-Lowell sliver testers and H & B roving testers.

Mill No. 1 has 26,512 spindles, all equipped with the Shaw type of controlled draft. This controlled draft installation was among the very first units to operate the Shaw type drafting element on a regular production run. The production of Mill No. 1 ranges from 50s to 80s. Mill No. 2 produces 36s to 50s on 25,920 spindles which were equipped with Saco-Lowell single-belt system. The total Saco-Lowell spindles in the China Grove Cotton Mills is 67,552.

No one can visit China Grove Cotton Mills without acquiring the impression that the plants are efficiently operated. This is especially true of Plant No. 3, which was built for a specific purpose and was carefully planned in every detail.

# How Do You Open Your Cotton?

By V. E. OLEMAN

OPENING cotton seems almost elementary. Well, who opens your cotton? Most of the time this is left entirely to the yard or the outside crew. They take care of all the details. Yet, there are quite a few important items connected with the opening of cotton.

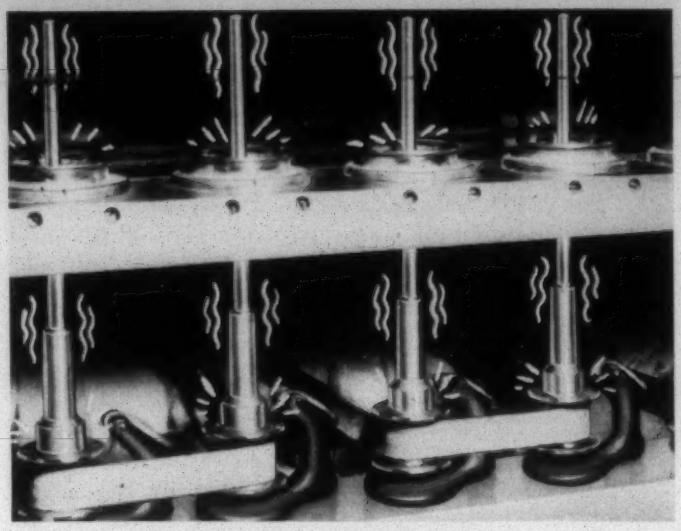
In storing or warehousing cotton it is an excellent idea to place individual marks or lots of cotton together. In so doing, when it is time to get out a mix you can take a certain number of bales of each lot or mark, thus obtaining a better blending and also it avoids going abruptly from cotton of one section of the country to another which often causes trouble in the spinning. This also helps when green cotton of a new season is first used, as it can be mixed gradually with old cotton and the transition from one crop to another is hardly noticed.

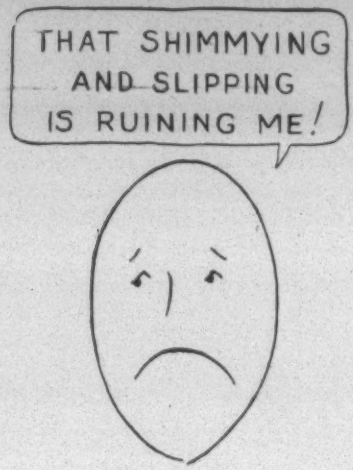
Another thing to watch is damp cotton. This especially applies to mills that buy local cotton, where it is the practice of lots of farmers and gins to let cotton remain outdoors until sold. It is best to put damp cotton all in one bay of the warehouse and let it dry out and use a few bales at a time in a mix. This will further eliminate variation in numbers and break of the yarns.

### Removing Bale Ties

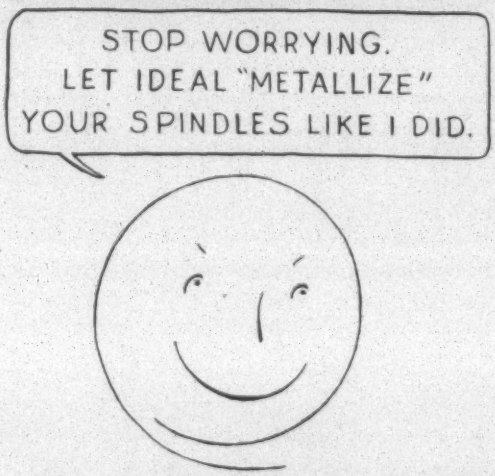
Where you do take your ties off the cotton? This is important. One of the best practices I know is to place a bale on a hand truck *outside* of the opening room and remove all the ties before trucking into the opener room. In this manner, no metal is taken into the opener room and as a result you will find opener room fires greatly decreased. I know of a mill that practices this removal of ties *outside* of the opener room and it has not had a fire in the opener room in three or four years. So remove *all* ties from the bale before trucking into the opener room and you will avoid a lot of mess and trouble resulting from opener room fires.

There are several ways to remove ties from cotton bales. One way is you can cut them off and another is to use a

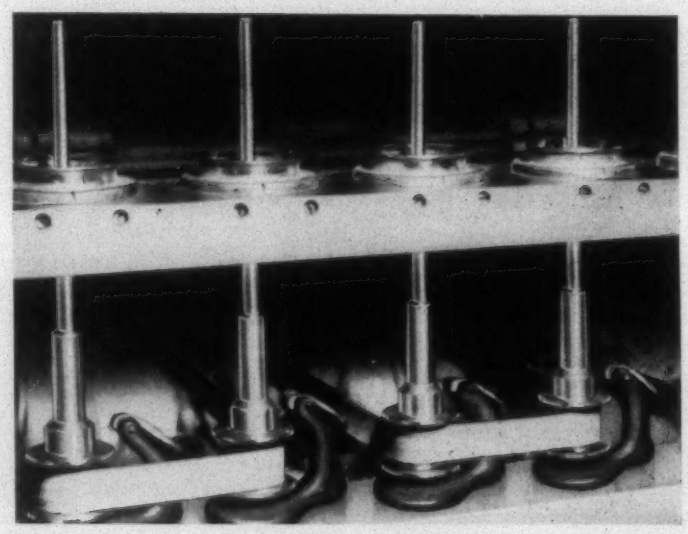


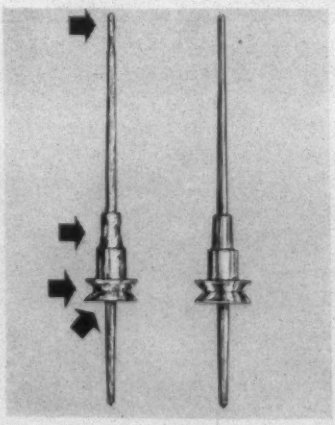



. . . not only bruising and tangling my yarn, but wearing out my equipment. Those worn spindles and wobbling bobbins have cut production 10 per cent already, and they're getting worse!




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Illustration at left shows Worn Spindle
Illustration at right shows Ideal Rebuilt Spindle

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special tool that flips the ties right off without cutting them. This tool is made by the machinery manufacturers and is valuable when cotton comes flat and the ties are long. Thus you can save your ties, bundle them and resell them. Also they are valuable to you in rebaling waste. The writer ran a mill for a number of years during the depression where every penny counted, and we used all our cotton ties to bale cloth and bought no baling ties from outside sources at all for baling cloth. We were using local cotton with long ties.

The ties are removed *outside* the opener room and the cotton is trucked into the opener room and placed into position. Now, how do you remove the bagging and how do you pick the bagging? A lot of mills just roll the bagging back over the bale and give it a sort of half picking. Well, a lot of good money is often left clinging to some bagging. Just say you open 50 bales of cotton a day and leave two ounces of good cotton on each pattern of bagging. This is 100 ounces or six pounds a day and at 30 cents per pound means $1.80 a day or about $350 a year. That would pay the postage bill of some small mills.

One of the best methods I have found to pick bagging is to remove the bagging from the cotton without picking. Then it may be picked in several ways. First, you can have nails driven in the walls of the opener room just higher than a man's head. The bagging is quickly hung on these nails or hooks and a man standing upright can easily pick the bagging better than bending over a bale and half doing the job. Also he sees the whole sheet of bagging and can see if any large tufts of cotton are left on the bagging. Several mills remove the bagging as is and take it to the warehouse as is and when the yard crew has time, the bagging is hung up on nails and picked at leisure. This is a good job for rainy days. Some mills use a large table instead of hanging the bagging up on nails or hooks. But the table is not as convenient to pick bagging on as the hooks or nails in the wall where a man stands more comfortably than bending over a table.

A lot of mills take waste made in the opener room for granted and give it little attention. I have been in a number of mills studying waste and found conditions where thousands of dollars were being thrown away annually in the mill's motes and dusthouse. I have found some opening machinery that was designed wrong as to grid bars, etc., that would just naturally throw out good cotton. But there are a lot of conditions in the opener room that can be watched and remedied that will save the mills thousands of dollars annually.

First, one of the main causes of good staple going into the motes is bent grid bars. A buckle or piece of iron is thrown through the grid bars and some of the bars are bent. As a result good staple is thrown out day after day by the machines. Look at your grid bars in the opening room and see how many are bent and have these bent grid bars straightened out. One of the best systems I know of to keep check on this is have all the motes from one shift pulled out and left beside each machine *once a week* and then the superintendent can walk along and look at all the motes from each machine and he can quickly see if any good cotton is being thrown out.

Sometimes mills open their grid bars too wide for the grade of cotton they are using and throw out good staple. Then sometimes the draft from the fans is too low to pull the cotton around correctly and some good staple is allowed to fall out. So at least *once a week* have your waste pulled out beside each machine. Inspect it and see what kind of motes you are making.

One thing often neglected in the opener room is the leathers on the cages of condensers. Sometimes these are in very bad shape and many dollars of good cotton are sucked down to the dusthouse because of these bad leathers on condensers. Did you ever go down into your dusthouse and inspect the waste? Just pull some of the staple from the dusthouse waste and see how much good staple is going into the dusthouse waste.

Where it is difficult to control the waste in some machines in the opening room, I have found some mills that remedied this by changing from grid bars to perforated screens. This applies especially to vertical openers. One mill I know of saved several thousands of dollars a year in good staple that was going into motes by changing from grid bars in a Superior cleaner to a perforated screen.

How do you handle your waste from the opener room? Some take it out in boxes, some by vacuum and some by sacks. One of the simplest ways is to use sacks or bags. The waste is placed in sacks; sacks are taken to the waste house and into the proper bin, *leaving* the waste in the original sack. When it comes time to bale the waste, the sack of waste is taken to the press and emptied. In this way the waste is handled only once, when it is first put in the sack and thus remains in the sack until emptied into the waste press.

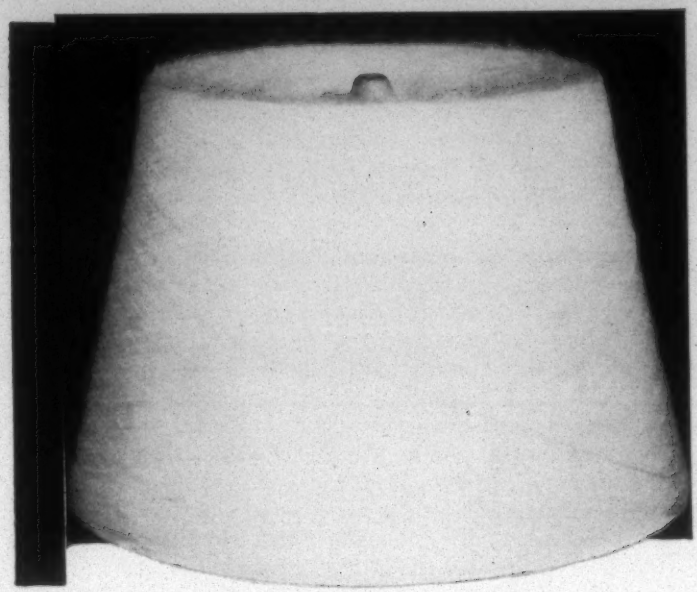
An often neglected item in the opener room is the waste machine used for shredding roving and stick waste. Some mills are building a partition about five feet high around this machine for three sides and covering with tin to prevent the spread of fires.

# THE MILL OF TODAY

By ROBERT Z. WALKER

## Part 20 – The Card Room

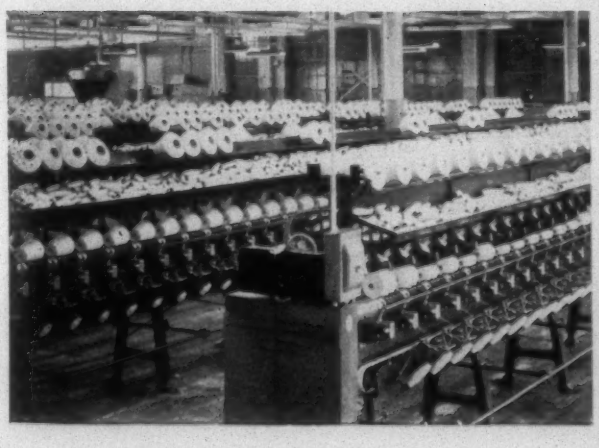
UNTIL the fibers reach the comb at the card doffer they can only be vaguely controlled. Up to this stage in the processing of stock into yarn the fibers can only be considered as being part of a large group where fiber control is extended to the group only. In opening, control is limited to large clumps of stock which are slowly separated into smaller clumps; in picking the clumps are broken down into small tufts; and in carding the tufts are finally separated into individual fibers. Although the fibers are almost completely separated at the card web there is not any means of accur-



This is spun nylon. Density of the cone is uniform and minimum throughout, with no hard ends. Underwinds are eliminated. There are no roll-cuts.

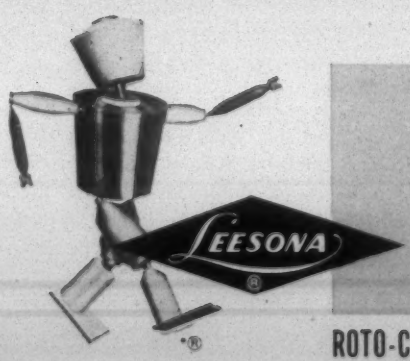
But whether the yarn is spun nylon, spun rayon, cotton, worsted or any other staple fibre, soft or abrasive . . . to be dyed, twisted, warped or knitted . . . the packages wound on the Roto-Coner* winder look as well, perform as well, on the next operation.

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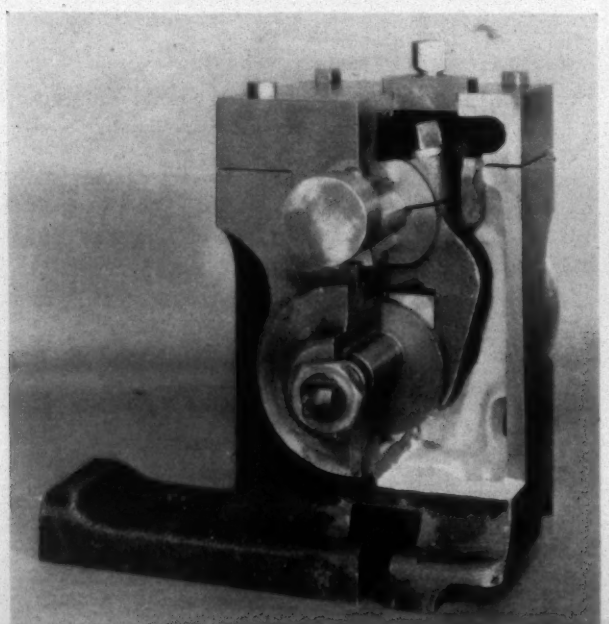
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ately controlling them due to the extreme weakness of cohesion of the web. However, when the doffer comb strips off the web and the trumpet condenses the web into the form of sliver, the fibers are finally in a condition which does permit extended control. At this point there is a radical change in the manner in which yarn processing progresses and in the mechanisms that are used. From this point on, cleaning is considered complete, except for combed yarn, and evenness is the prime objective. Evenness is attained through more direct and closer control of a strand of fibers which becomes more delicate at each stage of manufacture. This means that more attention must be focused upon eliminating any conditions, mechanical or otherwise, which would tend to deform the orderly arrangement of fibers in the strand.

The sub-assemblies at the front of the card cannot perform any correcting of variation in the sliver and serve only to strip the fibers from the doffer, condense the web into sliver form, and to compress and coil the sliver into a can. The evenness of the sliver is determined by the manner in which the fibers are distributed on the surface of the doffer, as the doffer comb can only strip off and form into a web the fibers present. If, through poor carding or bad clothing, the fiber distribution is uneven then the sliver will be uneven in a corresponding ratio. However, in order to preserve the low potential sliver variation, the doffer comb and mechanism, and the coiler assemblies must function perfectly.

The doffer comb is the most instrumental assembly at the front of the card insofar as affecting the carding operation. The doffer itself is little more than a means of carrying stock from the cylinder to the doffer comb, and as long as it is lined up properly with the cylinder, and is clothed correctly, will not create any serious problems. The doffer comb must strip the fibers from the doffer and perform this stripping without creating sliver variation. If the comb is to operate satisfactorily it must be in perfect condition and powered by a comb box that is properly functioning.



**A comb box cut away to show the working position of the eccentric shaft, split bushings and fork which drive the doffer comb.—Saco-Lowell photograph.**

The comb itself is simply a steel blade with teeth on its lower edge, the whole comb blade being attached by fingers to the comb shaft. The comb shaft is supported at one side of the card by a plain bearing while the other end is fitted into the comb box which imparts an oscillating motion to the shaft, and therefore the comb proper. The teeth of the comb should be straight and smooth in order that fibers will be stripped from all points across the doffer. A damaged or worn comb with hooked teeth or worn edges will not always grip the stock, leaving holes in the web which will create sliver variation.

## Setting Comb to Doffer

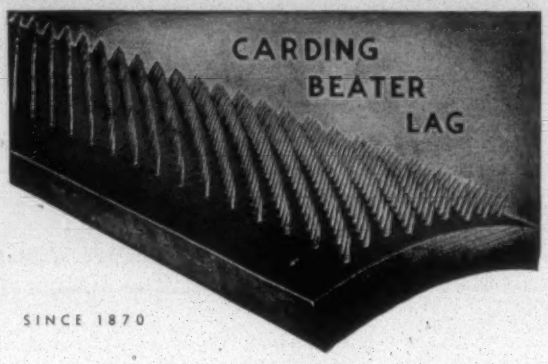
There are two major adjustments affecting the operation of the doffer comb, namely, the setting of the edge of the comb to the face of the doffer, and the range of the arc the comb travels in its reciprocating motion. The setting of the comb to the doffer is one of the most important settings of the card insofar as direct influence on sliver quality is concerned. The comb should be set as closely to the doffer as possible, so as to pick up a maximum amount of the good fibers, without becoming so close that the extremely short fibers, mote particles, and trash are also transferred to the web. This setting is more clearly visualized after observing the surface of the doffer, as a close inspection will show that a large percentage of the long, spinnable fibers are laying on the surface of the doffer wire with ends projecting outward, while beneath this layer of long fibers will be short waste fibers, imbedded particles of trash, neps, and other undesirable foreign matter. By setting the comb properly, it is possible to take off a large percentage of the good fibers without picking up too much of the shorter fibers and trash which would lower sliver quality. Whenever sliver quality drops due to the presence of too much pepper trash, this setting should be checked immediately, before the remainder of the card, and the picking and opening lines are investigated. There have been many instances in which mills have not taken full advantage of the extra quality control this setting allows.

This setting will always be a compromise, for while too close a setting will result in dirty sliver, a wide setting will allow too much good fiber to become impacted between the wires of the doffer clothing, where it will be removed as card strips, or waste. The doffer will become loaded frequently and will cause the cylinder to become loaded, so that stripping will have to be carried out more frequently. Sliver evenness will suffer from an over-wide setting and will be noticeable as the web will become uneven with holes and thick areas. Usually, a setting of comb to doffer of from .005 of an inch to .017 of an inch will be satisfactory, the exact setting depending upon such factors as the hourly production, the grade and character of the stock, and the required degree of sliver quality.

## Sweep of the Comb

The sweep or arc of the comb is adjusted to suit the web. Raising the comb tends to relieve the strain on the web while lowering the arc of comb travel tightens the web tension. Accordingly, for lightweight sliver, or webs which break down or stretch, the comb should be raised. With high production or with webs that are heavy, or with webs that do not separate quickly away from the doffer, the tension should be increased by lowering the comb. The exact

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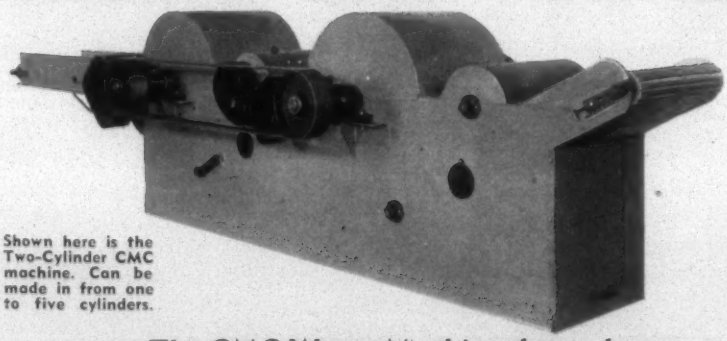
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positioning of the comb to suit a particular mill condition can only be obtained by trial and error, as even a slight adjustment may have an appreciable effect upon web behavior. This setting should be made so that the web will be tight enough to prevent sagging, but not under sufficient tension to cause stretching, so that the selvages are intact and not ragged, and so adjusted that the web travels smoothly to the large calendar rolls and trumpet at the front of the card.

The comb is actuated by an eccentric shaft driving a split bushing riding within a fork fixed to the comb shaft, so that the comb shaft is given its oscillating motion. The entire driving mechanism is enclosed in a housing and is called the comb box. As the eccentric shaft is driven at a speed ranging from 1,200 to 1,600, depending upon the speed of the doffer, and generally 125 times the doffer speed, and as the setting and travel of the comb is so critical, the entire comb box mechanism must be maintained in perfect condition. Wear in the bearings, or in the split bushings, will create an erratic movement that will damage sliver quality.

## Lubricating the Comb Box

The first safeguard against excessive wear is proper lubrication. The comb box is probably, with the possible exception of the spinning spindle, the most important single sub-assembly in the entire spinning mill insofar as the damage which can be inflicted within a short time due to insufficient lubrication, or the use of the wrong lubricant. The comb box is splash lubricated as the eccentric dips into the oil, partially filling the base of the comb box and distributes the lubricant to the oscillating assembly and also splashes it over the remainder of the interior of the box, where it creeps into the bearings of the comb shaft. The lubricant must have a sufficiently low viscosity to penetrate into all bearing surfaces and flow back to the reservoir, but in contrast, it must have the stability and film strength required to prevent metal to metal contact. If the lubricant is too light it will not protect the bearings against the wear caused by repeated shocks between two closely spaced parts; if it is too heavy it will not flow between the bearing surfaces at all.

A heavy oil which will not break down, thicken, or oxidize is recommended for this service. An oil of the correct composition will have the fluidity enabling it to flow into bearings and leave a film strong enough to prevent metal to metal contact. Using the correct oil, only a few maintenance precautions are required to assure long and continued service of the comb box. Part of the oilers' daily routine should be to check the comb boxes and to pick out of the breather ports any fly and lint that has accumulated. This fly may clog the breather port and seal the comb box so that the circulation of the oil is hindered. If it is not removed the fly may creep into the box and further clog up the lubrication channels. The level of the oil should be noted daily; a simple matter on many boxes as oil can be observed at the bottom of the breather hole when the box is filled, and the lubricant should be kept to the proper level. Too much oil can be used if the comb box does not have this type of breather and excessive oil is to be avoided as there will be churning effect that will tend to cause over-heating and perhaps breakdown of the oil itself. Insufficient oil will not permit a widespread splashing effect and some bearings will not be adequately oiled, with resultant wear and overheating.

An old saying in the card room is that if the comb box is not hot it is not running correctly. This is partially true, for the close tolerances necessary to control the movement of the comb will inevitably generate hot working conditions. However, if the box is so hot that the hand cannot be held on it, then something is wrong. Check first on the oil level and if the level is low the hot box is merely an indication of insufficient lubrication. If the oil level is high, it may be that the oil passages are clogged, and require cleansing with a solvent. On the other hand a very cool box is not a sure indication, as sludge deposits on the inside of the box may be acting as an insulating layer to all of the heat inside.

It is impossible to check a comb box of most makes, when it is off the card and without the comb shaft. Many comb boxes have been ruined when overhauled by mechanics who tried to turn the grooved pulley by hand. When they found this could not be done, the box was disassembled and the forks filed until the pulley would turn. When the comb shaft is installed, and the cap holding it is tightened, sufficient tension is brought upon the fork to spring it so that the comb will turn with adequate, but not excessive, play. When new split bushings are installed the comb shaft is loosened, the fork taken out, and the new split bushings put in. If the bushings are too tight a slight amount is taken from the sides of the fork, checking by using blue crayon to find the tight spots. However, only a slight amount should be removed due to the tension noted above when the comb shaft is tightened up. Many card grinders use a short stub of shafting, of the same diameter as the comb shaft, to fit into the box when making repairs. If this shaft is not used, the comb box cannot be properly repaired except on the card, to try otherwise will mean ruining it.

## End Play in Eccentric Shaft

The principal mechanical adjustment of the comb box itself, is in maintaining the proper amount of end play of the eccentric shaft. The eccentric shaft, which provides the motive force for the comb box and comb, is driven by band drive from the cylinder. The eccentric has fitted over it two split tapered bushings which fit into the tapered fork. The bushings slide up and down the fork as the eccentric turns and thus give the fork an oscillating motion that is transmitted to the comb shaft. The split bearings and the fork are tapered with both tapers identical so that all end play can be corrected by a thrust plug and bearing of the eccentric shaft, without having to manually adjust the fork or split bushings. The eccentric shaft should be tightened up, using the thrust bearing, until there is a practically imperceptable amount of play, just sufficient to assure freedom from binding while preventing any lost motion of the comb.

Leaving the comb, the web of fibers is collected into a strand of sliver by a large trumpet. This trumpet does not require any adjustment nor is the size of the hole of any great concern, unless it is worn excessively over size or very light sliver is being produced. However, it should be remembered that anything which would tend to disrupt the smooth flow of sliver will pull groups of fibers out of place and thus create serious linear irregularities, reducing the evenness of the sliver and destroying the otherwise satisfactory operation of the card. This disruption of the sliver may be caused by a rough edge or surface of the trumpet

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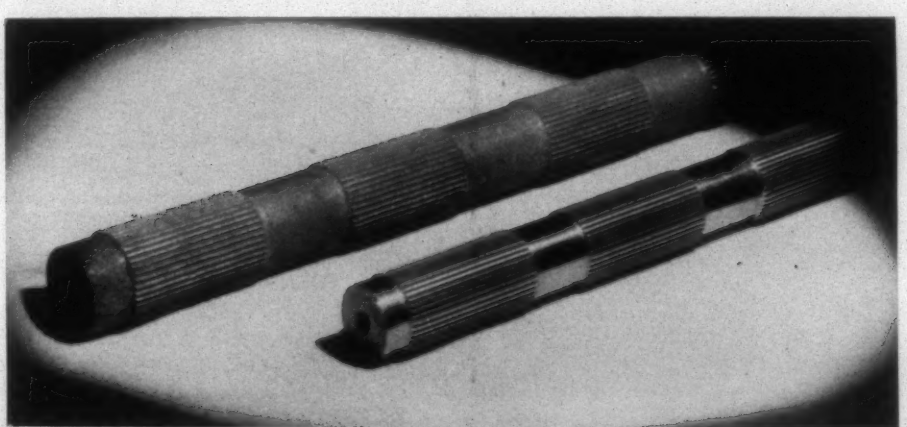


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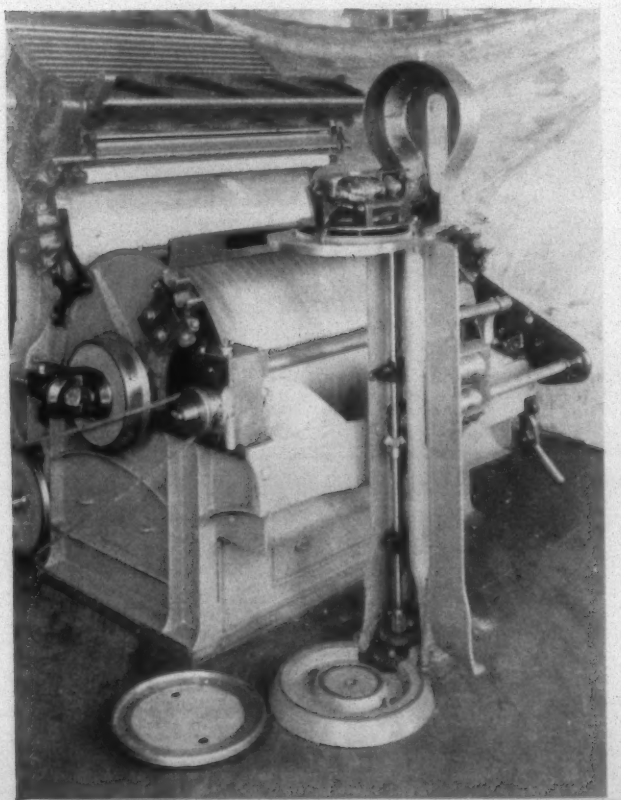
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or by the presense of oil or dirt within the condensing section.

A pair of calender rolls grasp the sliver as it emerges from the trumpet, draw the sliver forward from the doffer comb, and aid in condensing the fibers into a cohesive strand which can withstand the strain of being lifted to the calender rolls in the coiler. These calender rolls need only a minimum amount of attention, merely a routine check on cleanliness. The rolls must be clean and with a smooth surface. The top roll is self-weighted and rests on bottom roll, held in place by slots at the bearings; a gear on one end in mesh with a similar gear on the bottom roll gives it a positive drive. Cleanliness is essential as lint or waste in the bearings will not allow the full weight of the top roll to be exerted on the sliver, due to the cushioning effect of the foreign matter, and the same difficulty will occur if the teeth of the gears become impacted with waste. In either case sliver will be soft, weak, and fluffy, thereby decreasing the normal yardage that can be put into the can. Any reduction in the amount of sliver in the can will have a definite effect, although small, on the efficiency of both the card and the drawing, as the card will have to be doffed more often and the drawing supply will not last as long before recreeling is necessary. To be sure, this amount will not be pronounced, but it is a minor point which does have an effect on the final total performance in the card room.

Another check point is the condition of the clearers for the calender rolls. Both top and bottom rolls have a clearer assembly consisting of clearer cloth on a cast iron base. The clearers do much to pick up lint and dirt from the surface of the rolls and to prevent this waste from becoming part of the sliver. This is probably one of the most neglected sub-assemblies in the mill and in many cases the clearer cloth is never replaced, whereas it should be renewed whenever the cloth becomes very soiled or badly worn.



**The front of the card includes such important sub-assemblies as the comb box and coiler. Here the coiler bonnet is raised and coiler post door opened to show the gear trains, which must be kept in smooth operating condition.—*Saco-Lowell.***

## Coiler Assembly

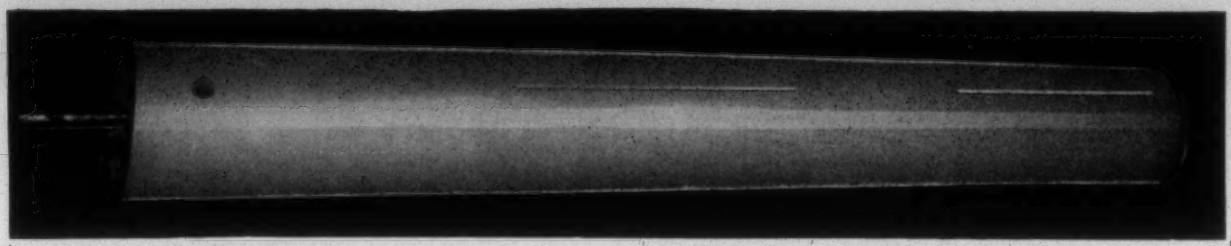
The final section of the card is the coiler assembly, consisting of the coiler, small calender rolls, tube gear, and can drive. In commencing to check the coiler the first step is to make sure that the coiler is correctly positioned in front of the card and then securely bolted, as a passing hand truck may have hit it at one time and knocked it out of line. The coiler post should be perpendicular to the frame of the card and with the can drive, composed of the can table and the coiler plate drive, absolutely level to both the card and each other.

The trumpet at the top of the coiler, in contrast to the trumpet at the front of the card, is critical insofar as the diameter of the hole is concerned. Whereas the trumpet and the calender rolls in front of the card perform only a general initial condensing of the sliver, the trumpet in the top of the coiler controls the ultimate amount of this sliver condensation. There is a well-established formula for determining the diameter of the trumpet hole, as follows: Diameter equals Square Root of Grains per Yard of Sliver x Constant x .015625. This formula holds true for all trumpets condensing sliver, for either cards or drawing, with the constant for cards being 1.42. Using this formula, the diameter of the trumpet hole for 40-grain sliver is .140 of an inch, for 45-grain sliver, .150, for 50-grain sliver .160, for 55-grain sliver .167, and for 60-grain sliver .175. The trumpet should be checked periodically with a gauge to assure against using ones which have holes worn excessively oversize.

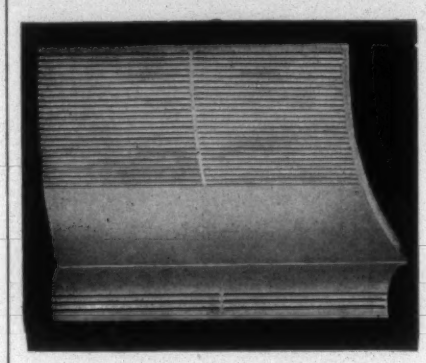
Directly beneath the nip of the coiler trumpet are the two calender rolls which have drawn the sliver up to the coiler trumpet and which pass the sliver down through the tube gear and into the can. One of the calender rolls is mounted so that it will pivot on an axis parallel to the axis of the fixed calendar roll, thus making it a self-weighted roll which can move in accordance with the thickness of the sliver passing through. The pivot bearings should be kept well lubricated, but not so much that extra oil floods the inside of the coiler head to dirty sliver or collect lint, so that the calender roll will swing freely and maintain pressure at all times. The calender rolls should be checked during the annual overhaul for wear at the centers caused by the abrasive action of the many thousands of yards of sliver that has passed between them. An appreciable amount of wear here, or in the bearings of the two rolls, will allow the sliver to pass into the tube gear without having suitable compression, and the sliver will be too soft. These rolls should be replaced just the same as a drafting roll is recovered or rebuffed when similar wear is evident.

## The Tube Gear

The most important part of the card coiler is the tube gear. This gear is actually a plate, with tooth cut into one edge so that it may be gear driven, and with a polished tube running from the center of the top diagonally to a point near the edge at the bottom. The tube gear is instrumental in arranging the coils of sliver in the can and therefore must have a smooth and steady motion, requiring that the gear



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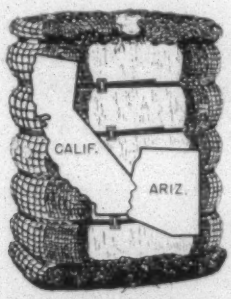
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teeth at its edge and the teeth of the gear driving it be free from impacted waste matter which would tend to give it an erratic motion. The tube through which the sliver passes must be smooth so that sliver will not catch and clog the passage or pull fibers from their arranged position in the sliver. Finally, the bottom surface of the plate must be kept highly polished as it acts as a compressing unit near the end of the doff when the can is overflowing with sliver and any roughness will pull the sliver out of its coiled pattern, tangling the layers, and ruining the evenness of the individual strands.

The can table supports the can and turns it so that the tube gear and the can table must work in a co-ordinated movement if the sliver is to be coiled properly. The arrangement of the sliver in the can is of utmost importance as a maximum of sliver should be placed in the can to eliminate waste, and the number of piecings allow the card to be run longer without doffing, and to lengthen the time before the drawing must be stopped recreeling. A maximum of sliver that can be packaged in the can will be obtained when the coils are as close to each other as possible without encountering other difficulties such as tangling. The can must therefore turn at a regular rate of speed and without any hesitation or erractic movement. Here the trouble usually encountered is not due to the presence of impacted lint, as this section of the coiler is well enclosed and away from most of the waste, but because the gears and bearings are hidden and out-of-the-way and therefore generally neglected at the weekly oiling period. As a result the gears become hard to turn and the can table begins to jump.

The card, like most modern production machinery, poses problems of operation involving precise settings, high speed of light assemblies, and lower speeds of very heavy sections. Precision work demands that the proper attention be paid to cleanliness and the prevention of waste deposits which would impair the accuracy of close settings. The motion of the equipment, over long and continuous periods of time, can be maintained only if the proper lubricants are used, and are adequately renewed. Attention to these two points will solve many of the problems concerning quality of material produced, the reduction in maintenance costs such as overhauling and the necessity for repair parts and a major factor in increasing the worthwhile life of expensive machinery.




# Spinner Opinions Of Irrigated Cotton

By SCOTT HATHORN, JR., Associate Agricultural Economist
University of Arizona Agricultural Economics Department

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During the decade of the '40s, Arizona and California grew cotton from the same seed source. The cotton produced in both states was characterized by the same fiber properties insofar as they were not altered by environment in the growing areas. This strain of cotton was known to the trade as California Acala (P-18). By 1949, California had replaced California Acala with Acala 4-42. Half of Arizona's 1950 acreage was planted to Acala 44. Both of these new strains are very similar in fiber characteristics.

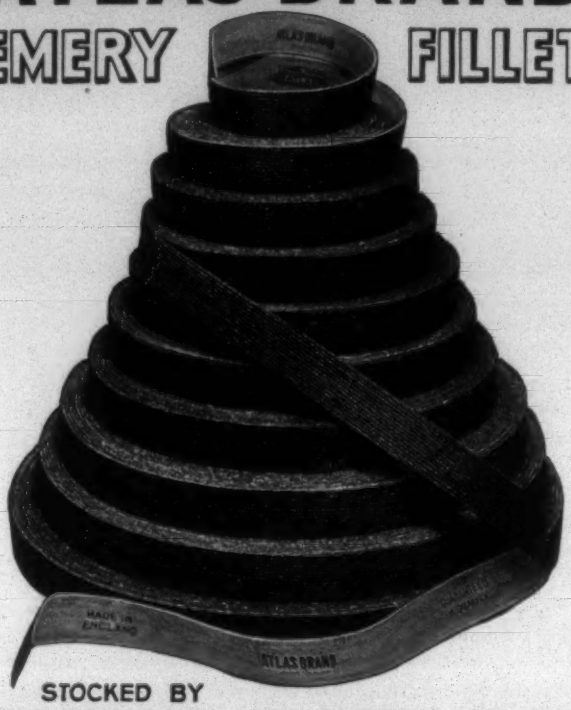
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During the months of February through April of this year, the writer interviewed 84 mill buyers, managers, laboratory technicians, etc., representing over 40 per cent of the total United States cotton spinning capacity. On April 1, 1950, there were 20.3 million active spindles in the United States consuming 100 per cent cotton. The mills included in this study were operating approximately 8.5 million spindles. In addition to the mills contacted, merchants, shippers, and brokers operating in the Houston,

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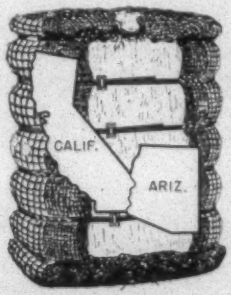
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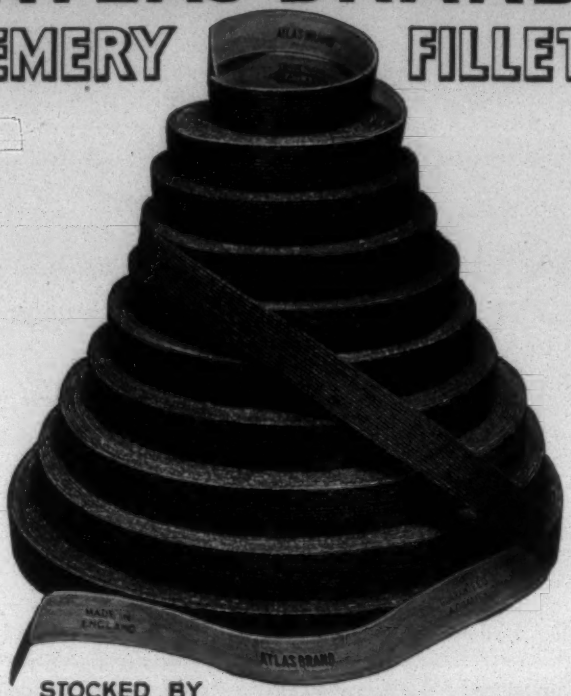
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Tex., and New Orleans, La., mill markets were visited. Information was developed on the following points: (1) price discounts on irrigated cotton; (2) spinning value and processing of irrigated cotton in contrast with rain-grown cotton; (3) mill use of area and variety in buying cotton; (4) the possible value of bale identification as an aid to buying; (5) the use of fiber measurements as aids to buying; (6) general raw fiber characteristics desired by mills in relation to products made; and (7) promotion of irrigated cotton.

### Summary and Conclusions

Several years ago irrigated cotton was discounted from two to five cents a pound under comparable grades and staples of rain-grown cotton. The discount had narrowed from 1½ cents in the Fall of 1949 to approximately one-half cent a pound by the Spring of 1950. Acala P-18 sold at a discount of three-fourths to one cent a pound under comparable qualities (grades and staples) of Acala 44 and 4-42 during the 1949-50 season.

The reasons for the discounts were a difference in the spinning values of the various cottons and a lack of promotion of the new strains. In the earlier years irrigated cotton was comparatively weak, wasty, immature, and extremely high in neps. Difficulty was also encountered in the dyeing and finishing processes. Few of these objections apply to Acala 44 and 4-42 now produced in Arizona and California, respectively. Most mills liked these two cottons fine except for the nep content, which is still slightly higher than in comparable rain-grown cottons. A greater degree of mill acceptance of the new strains over the old was reflected through a narrowing of the discounts.

In general most mills spinning cotton in the $1\frac{1}{32}$nds through $1\frac{3}{32}$nds-inch staple range market their output on a quality basis. In order to maintain product quality, most mills using Acala 4-42 and 44 changed their usual methods of processing as follows: (1) humidity was increased, particularly in the opening, picking and carding rooms; (2) the cotton was beat less in cleaning operations by by-passing some of the cleaning machines; and (3) the rate of carding was reduced somewhat. These changes, particularly the slower rate of carding, reflected in higher processing costs. The new strains of irrigated cotton should not be discounted by more than the increase in processing costs. Some mills estimated this figure to be approximately one-half cent a pound.

The amount of the discount must necessarily depend on the use to which the cotton is put. For certain uses, tire cord for example, Acala 44 and 4-42 may be preferred to rain-grown cotton because they possess certain desired fiber properties to a greater degree. A manufacturer of print cloth may be able to use irrigated cotton of today with greater ease than a producer of high quality combed broadcloth and for that reason the former may be willing to buy it at less price differential than the latter.

Large potential outlets for Acala 44 and 4-42 exist in the tire cord and print cloth fields and to a lesser degree in the plied yarns and sheetings fields. Widest market demand will probably be for grades ranging from strict low middling bright through strict middling and staples ranging from $1\frac{1}{32}$nds through $1\frac{3}{32}$nds inches.

The range of usefulness of these new strains of cotton has been extended considerably over that of Acala P-18 because of improved fiber properties, resulting primarily through breeding, and increased spinning value. To the extent that the *nep content* of Acala 44 and 4-42 can be reduced, their range of usefulness can be extended.

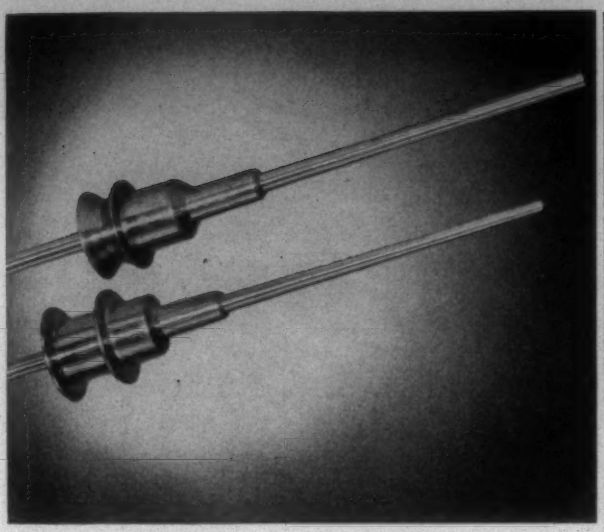
At the present time cotton is identified in the minds of mill buyers by area of growth rather than by variety. Within a large buying territory such as the Memphis territory, cotton available at certain points is better than at others. This could result from a number of causes such as variations in soils, climate, variety and cultural practices. Most mill buyers realize that the spinning value of raw cotton is influenced by various inherited fiber properties and they believe that variety standardization by producing areas would tend to reduce variations in character of cotton. Even in a large producing area such as the San Joaquin Valley of California where relatively uniform growing conditions prevail and variety is standardized, there are still some buying points within the area better than others. Of course, even if variety is standardized, environmentally induced variations would still remain, but the net result is likely to be a more uniform cotton.

Most mills interviewed favored some system of permanently identifying Arizona's Acala 44. Such factors as variety, area of growth, and year of growth were wanted on the identifying tag. Bale identification as an aid to mill buying is feasible only if the cotton is produced in considerable volume in areas possessing relatively uniform growing conditions. Mills have ignored one-variety community efforts largely because of insufficient volume to justify an attempt to assemble the cotton needed in such small areas. If the conditions noted above prevail, namely, a large volume of one-variety cotton produced in an area possessing relatively uniform growing conditions, merchandising cotton with variety and area of growth as part of the standard description becomes feasible. These conditions can be met in Arizona and as a first step in such a program the Arizona cotton industry should identify Acala 44 in the manner suggested by the mills as noted above.

More and more mills are establishing fiber laboratories. Thus far, the principal use made of these laboratories as an aid to buying cotton is to evaluate buying points from the standpoint of desirability of the cotton available. The next logical use of these fiber measurements will be to correlate fiber properties with spinning performance. From these results mill buying standards can be established in terms of raw fiber characteristics consistent with good spinning performance for various end products. This entire development will enable mills to buy cotton with greater precision than ever before.

Mill buyers have a fairly definite idea of the fiber properties needed in raw cotton to give best results in the manufacture of various products. The properties most desired were strength, high uniformity and maturity, freedom of neps, average fineness, and low manufacturing waste. These factors generally result in higher spinning performance and lower processing costs. Most buyers thought that irrigated cotton was on the fine side and that attempts to breed a coarser cotton should be made.

There was little evidence of effective promotion of irrigated cotton. Immediate attempts should be made to gain greater mill acceptance of irrigated cotton by a flow of technical information through trade journals widely circulated in the trade and through the use of selected direct mailing lists. Some mill buyers and particularly mill superintendents are still prejudiced toward irrigated cotton.



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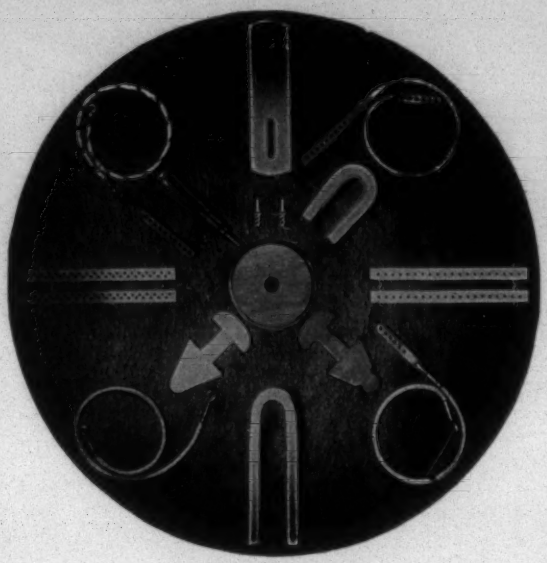
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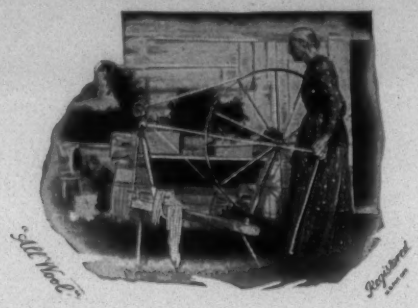


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By FRANK D. HERRING

## Part 14—The Warp Stop Motion

THERE are several types of warp stop motions on looms in operation today. Some are electrical and some are mechanical, but they all have three things in common: they use drop wires (through which the warp threads are drawn); they have drop wire bars (on which the drop wires are placed); and they have some type of girt arrangement on which the drop wires and bars are mounted.

When applying any type of warp stop motion on the loom proceed as follows: As previously stated, the take-up roll should be raised as high as the adjusting arrangement will allow, and tighten it securely in this position. Put the top harness strapping in place and swing the harnesses on them. Assemble the bottom harness assembly, connect them up with the harnesses. Mount the temples on the breast beam, and file the temple plates, if necessary, to adjust the temples in the proper relation to the race plate. The bottom of the temple bars should clear the race plate one-eighth of an inch. Next, attach four pieces of stout twine to the whip roll shaft, two near each end, and draw them through the harness eyes of two harnesses; if using more than two harness, draw the twines through the harness eyes of the two back harness. Extend these twines through the temples, under the temple burrs, and around the top of the take-up roll and tie them to the cloth roll. Proceed to adjust the harness settings in relation to the race plate. This is done by adjusting the top and bottom harness straps. With the lay on back center position, and the harnesses at their extreme up and down positions, adjust the harness straps to a point where the twine in each harness will clear the race plate a maximum of one-eighth of an inch. Also, with the lay still on back center, adjustment should be made so that the front harness will clear the reed cap one-half an inch. This adjustment is made by moving the arch ends back or forward on the loom side. (I suggest the use of the twine to make the harness adjustments because we are building the loom and as yet do not have a warp on it.)

Next, time the harness cams with the two harnesses in level position and the reed far enough back from front center so that the harnesses will be wide open when the lay is moved to front center position. This is done by loosening the harness cam driving gear on the cam shaft and placing the lay on front center and turning the driving gear until the harnesses reach the open position; this setting should always be made with the shuttle in the shipper handle end of the loom. The distance from front center position of the lay back to the point where the harnesses will be in level position will vary due to the fact that different types of harness cams are used. The important thing is to be sure that the harnesses are wide open on the beat, or when the lay is on front center; that is why I suggest the above procedure when timing the cams. (Much more will be said about this when we get to fixing the loom and weaving cloth.)

Some harness cams are designed to give a longer throw on the treadles, and this will give a wider opening of the sheds. This should be determined by the size of shuttle being used. To check this proceed as follows: after the above-mentioned settings have been made, pull the lay to back center (the top and bottom sheds will be wide open at this point), place a shuttle in the shuttle box and move it out onto the race plate between the sheds. There should be a minimum clearance of one-quarter of an inch between the front wall of the shuttle and the yarn, or twine, in the top shed. (Some mills have changed to a larger shuttle in order to accommodate a larger package of yarn, or filling, and have not changed to a larger harness cam; this is bad, because it adds up to a higher percentage of warp yarn breakage, loom stoppages, and seconds in the cloth.)

Shown in Fig. 44 are the parts mentioned herein. This sketch is made showing the rigging for a plain two-harness weave, with the No. 8 single-thread warp stop motion girt. But as stated before, when using more than two harnesses these settings should be made using the two back harnesses. The parts shown in Fig. 44 are as follows: (1) whip roll; (2) stop motion girt; (3) twine used for whip roll setting; (4) reed line with lay on front center; (5) take-up roll; (6) drop wire; (7) top shed; (8) bottom shed; (9) cloth roll; (10) drop wire bar; (11) whip roll shaft; (12 and 13) harness heddles.

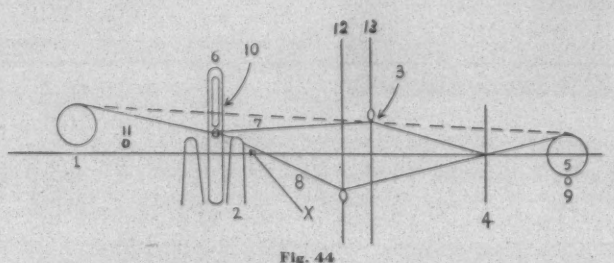


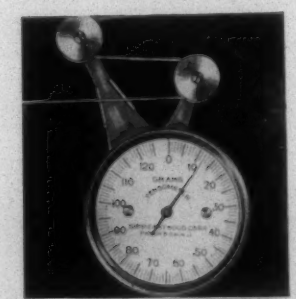

Fig. 44

Next, turn the lay to back center position, with the second harness up, and draw a stout twine from near each end of the whip roll across to the take-up roll, as indicated in Fig. 44. This twine should be drawn through the heddle eye of the top shed. Adjust the whip roll, up or down to where the twine will rest at the bottom of the heddle eye, but not be drawn out of a straight line from the whip roll to the

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take-up roll. This twine is indicated by broken lines in Fig. 44.

With the lay still on back center position, and the sheds wide open, put the stop motion girt in place. Ten inches from the top front of the girt to the back harness is a safe setting; however, this will vary in some instances due to the number of harnesses being used, and the type fabric being woven. Raise the girt to a point where the yarn, or twine, will be slightly raised at the point of contact, indicated by "X" mark in Fig. 44. (The settings mentioned herein are of vital importance, because they determine the type face or cover put onto the woven fabric, and much more will be said about them later.)

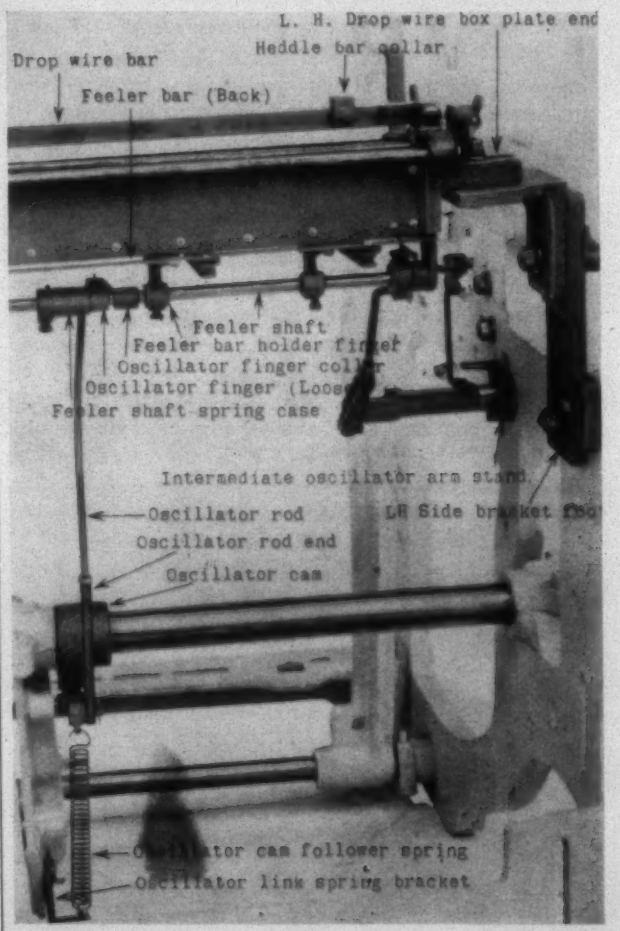



Fig. 45

Shown in Fig. 45 is the No. 8 single thread warp stop motion. This and the sliding bar are the two mechanical stop motions most generally in use today, so these are the ones I will cover. One good thing to bear in mind regarding the No. 8 stop motion is that one-half of the movements of its working parts are positive, as they are actuated by the positive drive of the stop motion cam. The other half is semi-positive, as they are actuated by the push or pull of springs. This being true, it is vitally necessary that all movable parts work free of any binding whatsoever. Another thing to remember is the fact that all the working, or movable, parts should be set at the exact center points of their movements. As I have stated before first things must be done first if a good job is to be done when building or fixing a loom. So, when setting this stop motion the proper

place to start is at the stop motion cam, as the motivation of all the movements are derived from the cam. (Incidentally, all the parts should be assembled on the stop motion girt before it is put into position on the loom.)

First, put the oscillator cam follower, spring and bracket in place. Adjust the bracket for the necessary tension on the spring and tighten it securely. Excessive tension should always be avoided on this spring; there should be just enough tension on it to draw the parts back to position after the stroke of the cam. Put the oscillator rod in place and attach it loosely to the oscillator finger. Turn the cam, actuating the movements of the oscillator finger up and down, and adjust the oscillator rod end until the stroke of the loose oscillator finger is the same up and down from the center point, or level position. Then with the loose oscillator finger in level position tighten the cam to the cam shaft. Put the oscillator finger collar in place with the extension lug on it contacting the extension lug on the loose oscillator finger on the front side, towards the take-up roll, then put the feeler shaft spring case in place and turn it in the direction to hold the two extension lugs in contact with each other; move the front feeler bar to exactly center position of the opening in the bottom of the girt, or exactly center between the bottom space between the front and back drop wire box plates, and tighten the feeler shaft spring case to the feeler shaft. Apply the brake to prevent the stop motion cam from being out of position. Set the drop wire detector wire half way of its movable stroke, and tighten the wire bracket to the feeler shaft. Then, beginning with the oscillator arm (back), proceed on through to the knock-off by applying the parts as shown in Fig. 45 and setting each movable part, or piece half way of its movable stroke, and tighten each bolt and set screw securely. Apply the knock-off rod and adjust it to the point where there will be no lost motion between the knock-off lever and the shipper handle, with the shipper handle in the "on" position. The knock-off mechanism shown here stops the loom off when the lay is in back center position. Adjust the knock-off bunter, with the lay on back center, to where there will be one-quarter of an inch play between the bunter and the knock-off.

Next, loosen the set screw in the stop motion cam, and turn the lay to the extreme front center position and tighten the set screw in the cam pointing straight up. All mechanical warp stop motions consist of numerous small parts, and movable gadgets. This being true, I have found it a very wise policy to go back, after the installation and all adjustments have been made, and start at the cam and tighten all screws and bolts securely, and see that all cotter pins are in place and slightly opened to secure them in place.

### Sliding Bar Warp Stop Motions

The No. 17 silding bar warp stop motion has four banks of drop wires. The No. 21 has six banks. The No. 11 knock-off is used with both motions with friction pulley driven by either motor or belt. The No. 12 knock-off is used on looms with tight and loose pulleys. Both knock-offs stop the loom with the shuttle in the left-hand box and the lay on bottom center, provided the brakes are properly adjusted. The tight and loose pulleys need extra time for the belt to clear the tight pulley, so No. 12 is tripped on the forward movement, or front center of the lay. The No. 11 on the backward movement, or on back center. This leads to a difference in the setting of the sliding bar stop motions


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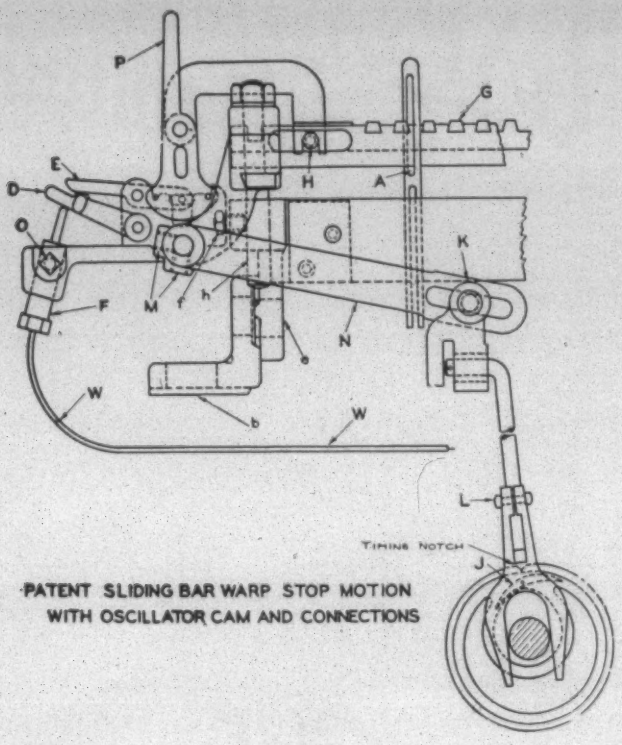
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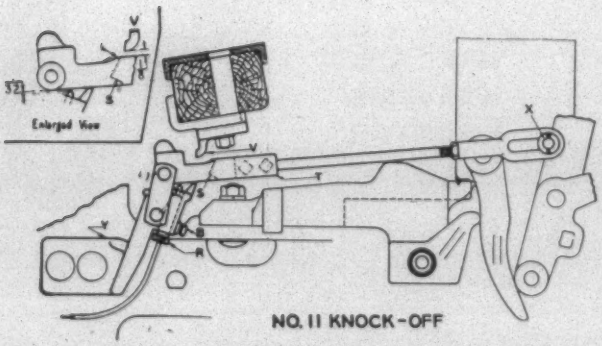
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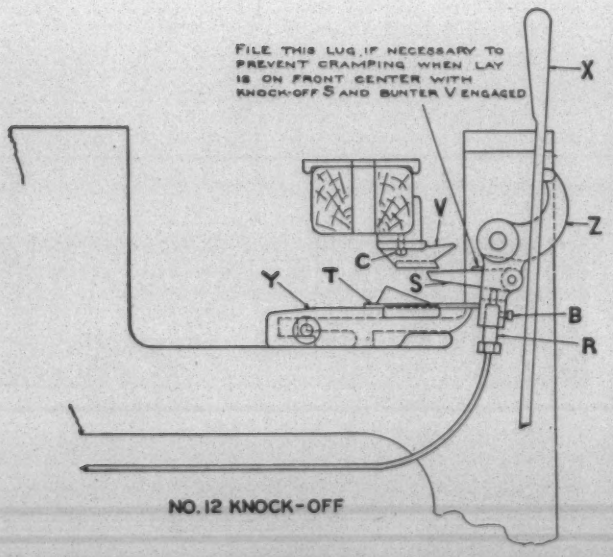

PATENT SLIDING BAR WARP STOP MOTION WITH OSCILLATOR CAM AND CONNECTIONS

Fig. 46




NO. 11 KNOCK-OFF

Fig. 47




NO. 12 KNOCK-OFF

Fig. 48

according to the knock-off being used. With the No. 11, parts are set with the lay in extreme back position, with the No. 12 in extreme front position.

Shown in Fig. 46 are the working parts of the sliding bar stop motion. Fig. 47 shows the No. 11 knock-off, and Fig. 48 shows the No. 12 knock-off. All moving parts of this stop motion are set on the center of their movements. The directions for setting follow, with proving test given. For the No. 11 knock-off, set the lay in extreme back center position with the shuttle in the right-hand box. Apply the brake to secure the lay in back center position. Set the oscillator cam with the follower "J" at center of motion as shown. Set oscillator rod end "K" central in slot in oscillator arm. Through cap screws "L" adjust rod so that top of oscillator rod end "K" will be in line with bottom front warp support, or girt. Loosen set screws "M" in oscillator arm "N" and set sliding bars as follows: have teeth "G" of sliding feeler bar completely close notches in feeler bar holder, with feeler bar fingers "P" vertical. Studs "H" will be approximately central in slots of feeler bar holder. Tighten the set screws "M," being careful to preserve the settings as made. Loosen set screw "O" in feeler bar finger base. With plunger finger "D" held against feeler bar finger trips "E," push plunger holder "F" through finger base until the plunger just touches plunger finger "D," being careful plunger is not pushed back into holder or the knock-off raised. Tighten set screw "O."

To adjust the No. 11 knock-off proceed as follows: knock-off stand "Y" assembly is positioned under lay by adjusting the connection when shipper handle is off and knock-off rod end "T" is pushed towards back of loom on knock-off stand. Adjust connection to shipper handle so that parts clear rim of wheel. Move the lay forward one inch from back center position and pull shipper handle on. Adjust knock-off stand until top of knock-off "S" lines up with top of knock-off rod end "T" and surface "K" is about one-eighth of an inch below knock-off bunter "V" as shown in the enlarged view, Fig. 47.

Loosen set screw "B" and adjust plunger holder "R" so that plunger will clear under side of knock-off "S" by 1/32nd of an inch, tighten set screw. Connection must not bind on stud in shipper handle "X." Push lay to back center position with shipper handle off and knock-off rod end "T" pushed clear back. Loosen cap screw under lay and set knock-off bunter "V" in front of knock-off "S" with enough clearance to let knock-off drop free from bunter after a warp stop so that the shipper handle can be pulled on. Tighten set screw. To test clearance between knock-off rod end "T" and bunter "V," slide rod end forward and back, moving lay to find close point. There should be no interference when shipper handle is pulled on.

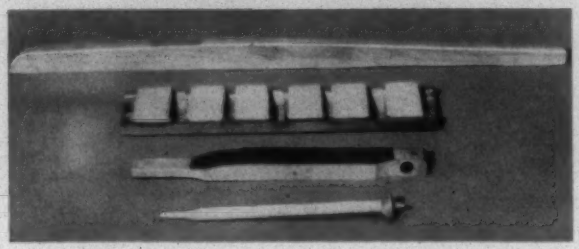
## Paper Tubes For Loom Beam Repair

PAPER tubes, made of high grade Duro paper, are now being used in the repair of loom beams. Developed by the sales research department of Sonoco Products Co., Hartsville, S. C., in co-operation with R. A. Forsaith, manager of Strongwall Mills, Inc., at Cannelton, Ind., the paper tubes reportedly effect a savings of some $5 on each loom beam repaired.

The paper tubes have been found to be as durable as they are economical. Mr. Forsaith reported recently that Strongwall Mills was using some 50 of the paper tubes with

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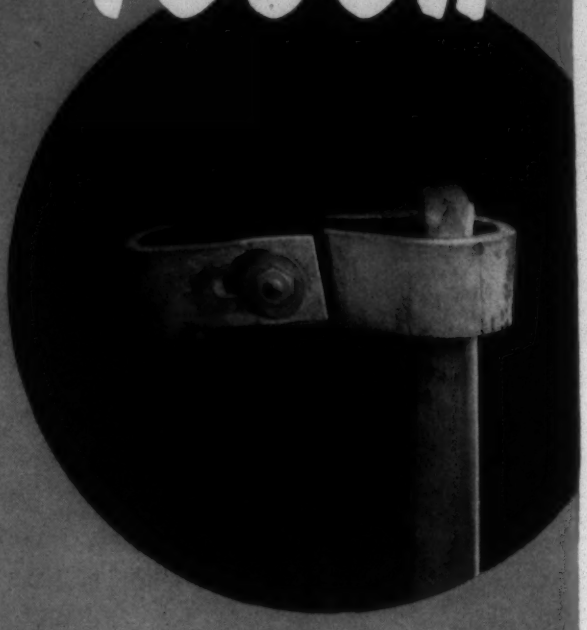
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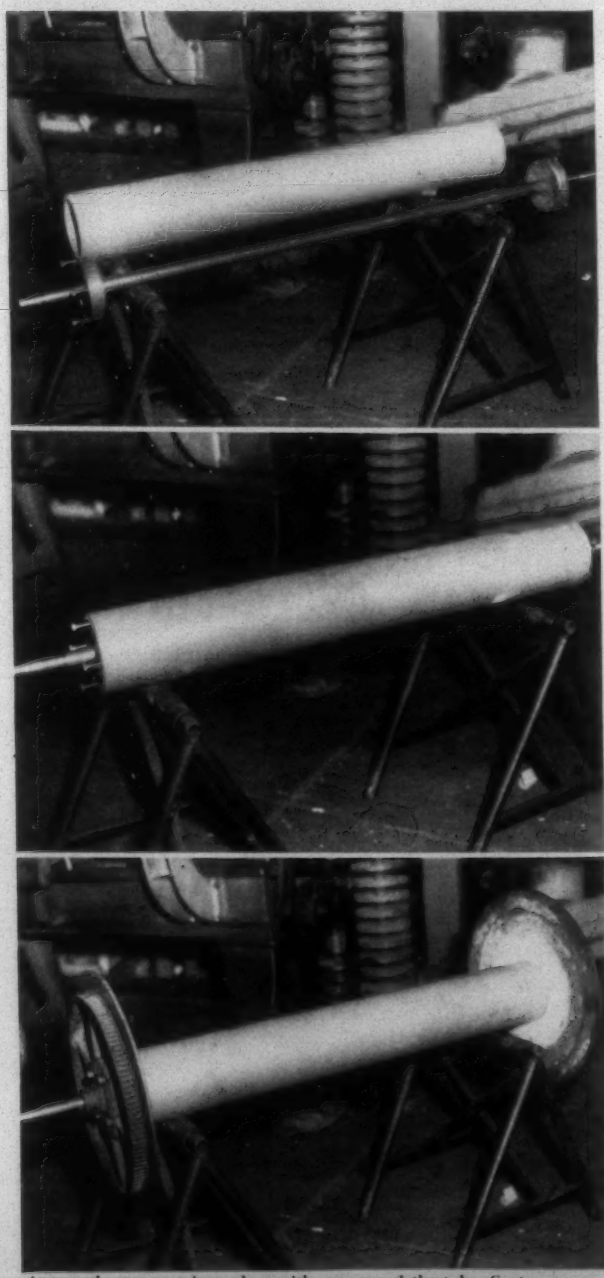
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complete satisfaction and that some of them were on their fourth or fifth refill. They are using the paper tube as the barrel with the steel shaft running through. However, the tubes can also be used over the wooden barrel of the beam after the barrel has been turned down. Some mill men believe that this use of the tube will result in a much stronger beam.

An added attraction to the use of the paper tubes, the Strongwall Mills manager says, is that the beams are very flexible. When the shaft ends wear, it is possible to pull the shaft and put in a new one; if the paper tube is damaged, it can be very easily replaced. Furthermore, Strongwall reports, the tube will be very useful on narrow or wide warps.

Made in the cork cot department at Sonoco on an old roving can machine, the Duro paper tubes are convolute wound. The are available in lengths up to 48 inches with one-half of quarter-inch walls; wall thickness as desired, however, can be furnished. The half-inch wall tubes have an inside diameter of 5 1/8 inches, while the quarter-inch wall tubes measure 5 1/2 inches on the inside. E. S. Reid, manager of the sales research department of Sonoco, was, along with Mr. Forsaith of Strongwall, largely responsible for the development of the new tube.



**At *top*, the two cast iron plugs with screws and the tube. *Center*, assembled with each end of the tube pinned to the plug with four pins. *Bottom*, the finished beam with each cast iron head pinned to the shaft which in turn is covered by the tube.**

## Officers Of Narrow Fabrics Group Named

John E. Fite, Jr., of Krout & Fite Mfg. Co., Philadelphia, Pa., has been elected president of the Association of Narrow Fabrics Manufacturers, Inc., which was formed this Spring in an effort to meet an increasing number of problems in the industry. Other officers are: William C. Lowndes, Jr., of Southern Weaving Co., Greenville, S. C., vice-president; Joseph W. Greene, Jr., of Hamilton (R. I.) Web Co., secretary; A. P. Smith of Russell Mfg. Co., Middleton, Conn., treasurer; A. R. Hutchison of J. Sullivan & Sons Mfg. Co., Philadelphia, assistant secretary-treasurer; Frank E. Slack of Philadelphia, who also is president of the Association of Cotton Yarn Distributors, Inc., managing director; and T. Ewing Montgomery, Philadelphia attorney, counsel.

Among directors in addition to the officers are William H. Ellis of Carolina Narrow Fabrics at Winston-Salem, N. C., and Rudolph Kemp of Tape-Craft, Inc., Anniston, Ala.

## British And U. S. Weaving Compared

In a report issued on June 21 to the Cotton Spinners and Manufacturers Association and the Northern Counties Textile Trades Federation, a group of British experts on the Cotton Weaving Productivity Team told their constituents that considerable capital will have to be invested before British cotton weaving mills can equal the production of United States mills.

The Cotton Weaving Productivity Team, composed of both management and labor from the United Kingdom, is a unit of the Anglo-American Council on Productivity which has as its purpose the promotion of a free exchange of knowledge in the realm of industrial organization, method and technique and thereby to assist British Industry to raise its level of productivity. Thus the cotton weaving team has been to the U. S. to study American production methods and their report entitled "Cotton Weaving" is filled with observations, findings, and recommendations to the British cotton weaving industry.

The report failed to specify, however, just how much capital was necessary, but added: "More is needed than just the re-equipment of our industry with machinery similar to that run so successfully in America."

The team of 13 supervisors, technicians and workshop employees generally urged that automatic winding and high-speed warping should be substituted for the commonly-used bobbin winding and slow-speed warping, and that machinery should displace many hand operations. The team suggested that a 40-hour work week be installed in place of the standard 45-hour schedule used today. Two shifts, and if possible, three, were recommended along with the 40-hour week. The team would not make direct man-hour comparisons of productivity between the United States and England. It explained in the report that "It would be impossible to give reliable comparative figures of productivity

between any two American plants visited, and the data obtained provided no sound basis for a direct comparison with British factories."

In naming "important observed differences," the group credited the United States with such advantages as: Combined spinning and weaving operations under one management; automatic looms; non-use (with one exception) of cotton mule-spun yarns; two or three-shift operations; mechanical trucks and storage racks; better organized flow of materials; low-end breakage rates; time studies; costs systems and wider use of engineers and consultants.

The group's recommendations were aimed at correcting these differences. Among other things, the redeployment of labor was recommended as necessary. The report also urged that machinery capable of high productivity while retaining flexibility be developed, that freedom to import essential new machinery be obtained, and that a taxation system allowing for the accumulation of ample profits be set up.

The committee confined itself to observations made in plants producing sheeting and pillow-case cloths, medium and coarse plains, overall cloths, fine plains for dress goods, typewriter cloths, crossborder handkerchiefs, voiles, dimities, muslins, haircords, poplins, leno shirtings, denims, tickings, colored checks and stripes for dress goods, linings, fancy dress cloths, corduroys, coarse sateens and twills, terry towels and heavy industrial canvas.

The group, which left England Sept. 29, 1949, and returned in early November, covered operations in the New York, Boston, Providence, Greensboro, Greenville, Birmingham and New Orleans areas.

The report cited as one of the trip's highlights a day spent in the cotton fields as guests of Hoke Oil & Fertilizer Co., Raeford, N. C. Nathaniel M. Mitchell, president of Barnes Textile Associates, Inc., was especially acknowledged as one who "was responsible for a fine introduction to our tour when he devoted a whole day to a survey of American practice and developments."

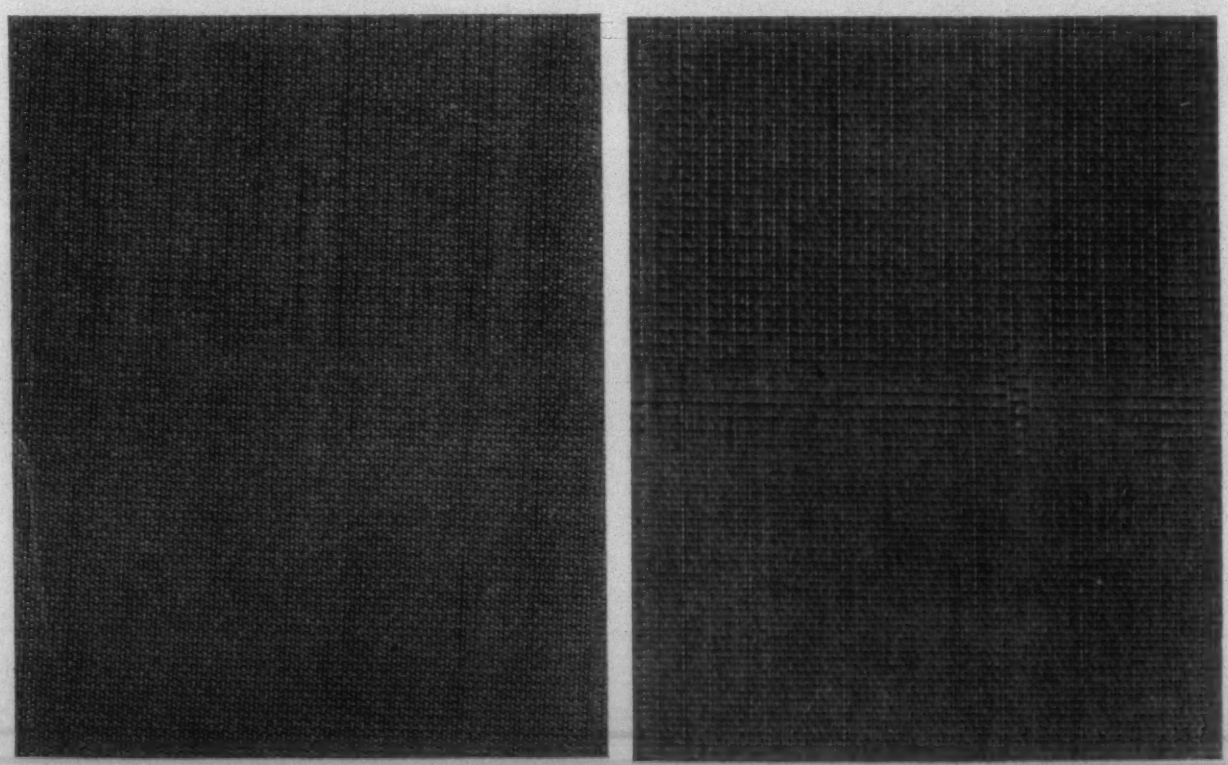
# Reediness In Nylon Fabrics

By W. ELLIS MANN, Du Pont Nylon Technical Service

A hungry, reedy appearance has been observed in many pieces of finished, plain-woven nylon fabrics. This effect has occurred not only in certain white goods, but in some acid dyed materials, especially where dyes are pushed onto the goods too rapidly.

An examination of dyed fabric of this nature revealed many reed marks where the dye is deposited more heavily on the edges of the reed marks than on the majority (ground) of the fabric. Closer inspection showed that wherever there is a sharply defined, long, narrow, heavily-dyed streak, there is also a reed mark.

Better dyeing technique, consisting of forcing acid dyes onto the fabric much more slowly, will produce a more nearly uniform dyeing of the fabric with a minimum of this



*Figs. 1 & 2*—Top halves of fabrics show appearance before installation of apparatus. Lines in center mark point where apparatus was installed. Bottoms of illustrations show effect on fabric after apparatus was installed.

fine-grained, mottled effect due to reed marks. However, the lean, hungry appearance and lack of uniform coverage due to reed marks is not improved by this better dyeing technique.

A unique method for minimizing the reed marks has been tried with considerable success on an experimental scale. It had been observed that the fabric which had gone through the temples on a loom, that is, about three inches on each side of the fabric, was much less reedy. Why did this happen? The best answer seemed to be that the fabric which passed through the temples went over two or three rather sharp angles, and in so doing spread or moved the warp ends over, thus closing up reed marks and producing more uniform coverage.

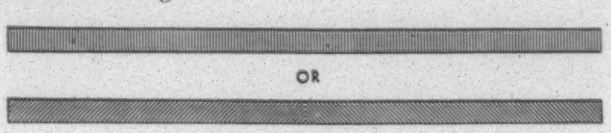



*Fig. 3*

Consequently, an attempt was made through use of a makeshift "temple" all the way across the fabric to force the fabric into closing up the reed marks *immediately* after the filling was beaten into the fell of the cloth and before any fabric "set" whatsoever had been effected. A long time interval would have tended to impart a partial set on the fabric and make the warp ends more difficult to shift and level out. The loom-width apparatus which was improvised consisted of two pieces of angle iron placed one above the other in such a manner as to cause the fabric to bend rather sharply through 90° and back again, as soon as possible after the fillling was laid into the fabric.

Close examination of the experimental fabric after conventional acid dyeing on a jig showed a pronounced difference in reediness between the fabric before and after the installation of the improvised aparatus. The improvement consisted not only in more even coverage of the fabric, but also improved dyeing uniformity. The improvement in dyeing has manifested in reduced contrast between the dark reed-ark edges and the lighter ground fabric. (see Figs. 1 and 2). The fabric with reduced reed marks gave the effect of being dyed lighter. Closer analysis showed this to be due entirely to the elimination of the heavy peaks in the intensity of dyeing around the reed-mark edges without any change of shade in the ground fabric. In other words, the intensity and incidence of reed marks were greatly reduced.

Improvements over our results could doubtless be obtained if greater localized distortion of the fabric were effected. For example, any one of tht following methods should be more effective than the one tried: (1) use angle iron with sharper edges than used in the original trial, thereby distorting the fabric more as it goes around these edges; (2) bend the fabric 180° and back again, around edges with dull grooves cut either straight across the edges or at an angle, as in Fig. 3; (3) Use long screws resting in the hollow-ground edges of two metal bars, as in Fig. 4. The screws should be dull so as not to cut the fabric.

By methods two or three, it is likely that the added effect of a bias-wise distortion of the fabric may be obtained, as well as a flexing action, thus imitating the effect of the bias-wise tension on fabric as it leaves the temples on a regular loom set-up.

## Proposed Rayon Cloth Standards Sent Out

Proposed American Standards for rayon fabrics were sent June 23 to 32 national organizations that make up the American Standards Association's sectional committee on rayon fabrics. Fifty-one specifications and 29 test methods are included in tthe 160-page book. The National Retail Dry Goods Association, sponsor for the A.S.A. project, is asking the national associations and technical societies to give the standards careful study and to vote on whether or not they should be recommended to the American Standards Association for publication as American Standards. If adopted, they will provide means of determining the performance of rayon fabrics for different uses in men's and women's clothing and for home furnishings.

Requests have already been received from leading organizations in the textile field to distribute more than a thousand copies of the proposed standards so that all branches of the textile industry, as well as cleaner, dyer and launderer groups, can be informed.

In circulating the document, the American Standards Association has called attention to the fact that the standards place no limitation on weaving or knitting constructions of any fabric, nor on the ingenuity of industry in the use of colors or finishes of rayon fabrics as long as they meet the requirements for serviceability in use. The requirements mostly affect the dyeing and finishing industtry and the gray goods weaving and knitting industries.

"During the first meeting of the Sectional Committee on Rayon Fabrics, L22, held June 16, 1949, in the Waldorf-Astoria Hotel in New York City, Jay D. Runkle, chairman, prefaced his formal address with a statement that the National Retail Dry Goods Association—sponsor of the project—would function as catalyst with no special interest except that of the consumer, to help manufacturers and producers interpret consumer demand in terms of standards which would indicate to consumers what might be expected of the textiles they bought," the letter of submittal for the Standards document explains.

Along with the standards book and its introductory letter, the American Standards Association attached a letter ballot by which the 32 organizations receiving the book could accept or reject the standards drawn up. Each standard was listed on the ballot separately so that decisions

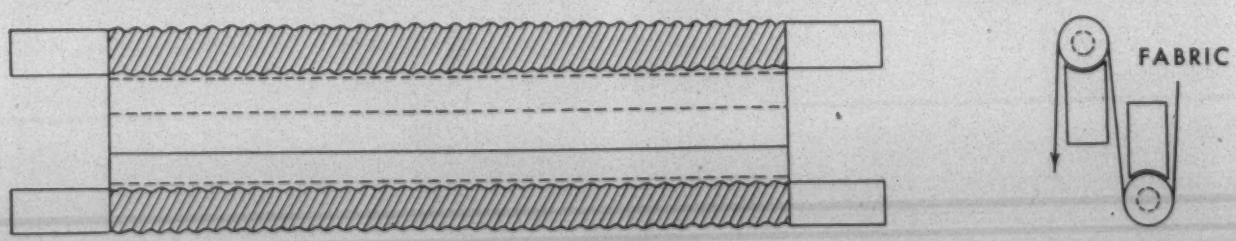



*Fig. 4*

could be made on each one individually. If any organization wished to reject any or all of the standards, it was asked to submit a technical report explaining its reasons.

## Three Bahan Loom Devices Patented

Edward F. Bahan of Greenville, S. C., administrator of the estate of William H. Bahan, has been issued U. S. Patent No. 2,499,050 for a crankshaft mounting for looms. The patent calls for a girder or girt secured to each of the side frames of a loom having a pair of bearings near each end thereof. There is a bearing on each side of and immediately adjacent to the two cranks on the crankshaft by which the crankshaft is supported at four different points for rotation. The rigid girt or bridging member, being secured to the end frames of the loom, imparts rigidity to the loom frame as well as providing a very much better means for rotatably supporting the crankshaft.

Mr. Bahan also has been issued Patent No. 2,505,635 for a battery supporting means for looms. This patent discloses means secured to a rigid portion of the loom and also secured to the hopper of the bobbin battery in a battery loom for additionally supporting the battery hopper, and the supporting means can also, if desired, have a supporting means extending therefrom to a point where the bobbin support can be supported, especially when the bobbin supporting portion of the hopper has been broken away.

A third patent granted to the Bahan estate is No. 2,495,803 for mounting picker sticks in looms. This invention provides what is described as an improved means for mounting the lower end of a picker stick, which is said to have several advantages over the other types of mountings heretofore employed. Among advantages cited are that a much shorter leather strap is used, and a torsion spring is employed which is very easily removable and much more accessible than the torsion springs and mechanisms for housing them previously used.

## Floor Covering Market For Synthetics

Chemical fibers are expected to capture an important share of the domestic floor covering market which in the past has consumed more than 200,000,000 pounds of clean wool annually, according to Harold Blancke, president of Celanese Corp. of America. He adds that rug merchandising in the future may be built on these fibers, thereby making possible new and improved products and opening new markets.

In a bulletin mailed to stockholders last month, Mr. Blancke said that after 11 years of research and study in developing and improving textile yarns for the rug and carpet industry, two fibers of Celanese Corp. of America have been found desirable for that use and are represented in the summer lines of leading floor covering manufacturers. One of these is crimped acetate fiber, which is used either alone or in a blend with wool. The other is Celcos, the new fiber which has been developed especially for the carpet industry. Combining the most desirable characteristics of both acetate and viscose staple, Celcos is being used in blends by leading carpet manufacturers.

# Bleaching, Dyeing & Finishing

# Desizing And Sizing

By IRVING TEPLITZ

DESIZING is one of the preparatory processes of removing foreign matter from textile fibers before the dyeing process is begun. The natural fibers such as cotton, wool and silk have non-textile material which must be removed by boiling and scouring, and these, along with the synthetic fibers, have man-made non-textile materials added during the manufacture of yarn and fabric which must be removed. Singeing, the removal of hairy fibers from the surface of the cloth, is usually a preparatory process, as may be the removal of oil and dirty spots in a special process. Dyeing, the application of color to the textile fiber, is a complete process involving the intimate contact of fiber and dyebath. Anything which interferes with the intimate contact between fiber and dyebath inhibits the application of dyes and causes streaky and blotchy color formation. The presence of foreign matter, particularly when unevenly distributed throughout the fabric, supplies an unsuitable base for the taking on of color, and is one of the sources of streaky goods. The problem of tracing the source of streaky colored goods is a complex one; is maybe due to improper preparation of the goods in scouring and desizing, in full or half-bleach is maybe due to the improper use of dyestuffs or combinations of dyestuffs or dyeing auxiliaries, is maybe due to the improper application of finishing materials, defective drying and handling of goods, or a combination of two or more of the probable sources of trouble.

If the finishing materials, drying and handling methods are eliminated as the source of streakiness, the color must be stripped, possibly by using both oxidation and reduction methods, and the fabric base must be examined for possible unevenness due to scouring, bleaching or desizing. Stripping, in itself, entails additional problems. The point of all this is that defects in dyed goods are difficult to determine as to cause, and may be difficult as well as costly and time-consuming to rectify; "an ounce of prevention is worth a pound of cure" goes the old saying and care must be exercised in the preparatory as well as other processes going into dyeing.

In the desizing of goods, the use of laboratory control is extremely useful as to the determination of the kind of

size used in the gray goods. Also, a laboratory check on the desizing method to be used is in order as a precautionary measure toward establishing the easiest and least expensive method of desizing. It is better to know what difficulties will arise at this point than to get into trouble during the actual plant run.

There are 12 possible agents used for sizing of gray goods warps: adhesives or binders, softeners, lubricants, deliquescents, penetrantes, preservatives, weighting agents, anti-foaming agents, chemicals for thinning starch, chemicals for modifying starch films, tints, and water. There is a seemingly endless list of materials which go into the classification of individual agents and this is not the end of possible variations; cloth construction, method of sizing, type of equipment used, variables in drying and human factors must be considered.

The burden of improperly desizing of goods falls upon the gray goods mill as well as on the dyer, and the greater burden is on the gray goods mill because it is first in control of the situation and sets the foundation which determines the ease or difficulty of the desizing operation. In the usual situation, the gray goods mill and dyer are separate organizations and the point of contact is small, especially when the ownership of the goods is in a third-party converter. The primary purpose of sizing of warp yarn as an aid to weaving; it is equally important that it should be removed easily by the dyer. In many cases, the gray goods mill informs the dyer of the materials used in sizing of the goods, and of changes in formulation.

## Cost of Materials

The ideal desizing operation is easy, quick and complete, and hence least expensive. A desizing process which requires prolonged boiling at 212° F. is less desirable than a short run through a bath at 150° F., as there are additional water and fuel costs in raising water from 150 to 212° F. A desizing operation which requires small amounts of material is to be preferred over one which uses more. Hence, from a cost point of view as well as efficient desizing, the laboratory check on gray goods is useful. All enzymes have varying proportions of proteolyctic and amylalyctic properties; however, an enzyme is classified as one or the other. In order to save time, a practice is in effect of using a proteolyctic and amylalyctic enzyme mixture, thus avoiding the need of a laboratory check-up on the type of size; however, this may represent a waste of material reflecting back on costs, and a review of this practice may be in order.

The adhesive or binder used in sizing may be a number of things, yet starch and gelatin are the most commonly used. Starch is used in sizing cotton warps, gelatin is used in viscose and acetate filament yarn warps, and a combination of both may be used in sizing spun rayon or blends of cotton, wool and rayon warps. Starch is removable by the use of amylalyctic, and gelatin by proteolyctic enzymes; the enzyme renders the sizing material into soluble form so that it enters the bath and can be removed by dropping the bath, and if necessary by further washing of the cloth.

Synthetic cloths are usually desized by washing the fabric in a synthetic detergent bath at 150° F.; if this is insufficient, then enzymes are used. Starch is removed by the use of enzymes. Viscose and acetate fibers should not be worked in boiling baths, while enzymes are effective at temperatures from 120-160° F., hence the temperature controlling the effective action of enzymes is the one used. If a cotton cloth has a very heavy starch sizing, it may be more economical to use a two-stage desizing method—work the cloth at the boil with synthetic detergent to remove as much starch as is possible this way, then drop the bath, cool the cloth, and use the enzyme method of desizing.

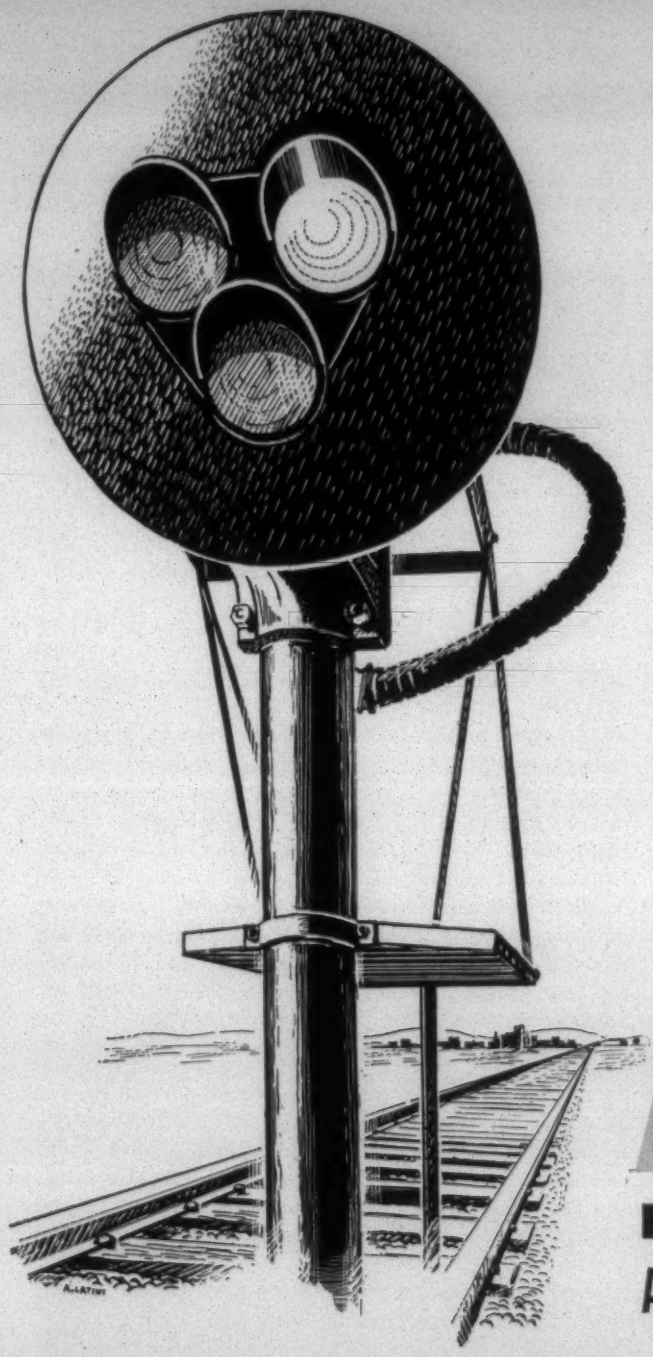
## Temperature and pH Control

Temperature control and pH control are important in the use of enzymes for desizing. Enzymes are effective in acid baths, less effective in alkaline. Some anti-foaming agents used in sizing may be alkaline so the pH on thte cloth must be considered as well as the fact that water is usually neutral or about pH 7. A mild acid such as acetic or formic may be used to achieve the desired pH of the bath. Some enzymes may be used in baths 140° F. and higher, while others are destroyed at this temperature, hence to be effective the bath must be at 135° F., or lower. The enzymes which are destroyed in effectiveness by temperature increase are useful for one-bath operations of desizing, scouring, and even dyeing; the desizing bath is held at 130° F., and when desizing is completed, the temperature of the bath is raised to 160° F., the enzyme is destroyed, and scouring and later dyeing is effected, with a saving in water and fuel over a two or three-bath bath method. As steam destroys the effectiveness of the enzyme, the enzyme should be entered into the bath after the optimum bath temperature has been reached; if the temperature of the bath drops and must be reheated, it is better to use intermittent shots of steam rather than a continuous supply of steam for maintaining temperature.

Where the period and type of contact between bath and cloth is short, a wetting agent is used to facilitate the action of the enzyme. Some wetting agents are unsuitable for desizing. Nonionic wetting agents are superior for desizing operations; the aryl alkyl sulfonate synthetics destroy the enzyme almost completely, and the sulfated fatty acid esters have a harmful effect, destroying 25-30 per cent of the effectiveness of the enzyme. As a practical matter, the manufacturer of synthetic wetting agents may not identify the product directly, but may do so indirectly by omitting to specify its use for desizing: what he does not say is sometimes as important as what he says; usually, he has several products and will recommend one in preference to the others. A wetting agent suitable for dyeing may be unsuitable for desizing operations, and by the same token, unsuitable for sizing. Some wetting agents have the power of rewetting, that is, show effective wetting ability after applied to a cloth which is dried and then placed in water; hence, the use of the wetting agent in sizing may have a rewetting effect when the desizing process takes place and may have an inactivating effect on the enzyme used. The proper wetting agent for sizing is the one which is also suitable for desizing.

## Mechanical Factors

The mechanical factors governing the use of a specific dyeing machine also dictate the application of the desizing materials. Hence, a wetting agent must be used when enzyme is applied on the padder, and care must be taken as to the nip and pressure of the padder rolls. The fact that the selvages of cloth on the jig may be held at a lower tempera-



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ture than the middle of the cloth will affect the effectiveness of the enzyme, though generally the reverse is true—it being easier to remove size at the selvages than in the middle of the cloth. If the enzyme is padded and then piled in trucks for three or four hours, the drop in temperature of the cloth during that period may affect the working of the enzyme. If the cloth is given a run through an enzyme bath on the jig and then batched on the roll to stand three hours, the liquid present in the cloth may drain from the top of the roll to the bottom with an accompanying accumulation of size at that point, thus tending to uneveness in desizing.

In dyebeck operation, it is important that there be an absence of cloth folds which do not permit all the surface of the cloth to be in good contact with the bath. Once the desizing operation starts, it proceeds unevenly, hence must be complete before the cloth is put through the next step. The jig method is superior to pad method of desizing, and the continuous method is superior though more expensive than permitting the cloth to stand for the desizing period. In the jig, the goods are given two to four ends, and in the beck are run about 30 minutes.

Caramelization of sizing materials is a defect caused by too rapid drying of the materials and is evident if a quantity of steam is given off by the first two cylinders of the drying machine, which should be run at temperatures lower than those in the middle cylinders. To remove caramelized size, excessive use of detergents is necessary with probably distortion and injury to the cloth. This defect is in control of the gray goods mill as is the type of oil used to lubricate and soften the binder. When warps or cloth are put into storage, some oils tend to oxidize and become insoluble and difficult to remove. Sometimes a soda ash bath may help to render the oxidized oil into soluble form; if acetate is present, possible saponification may take place in the presence of alkali; the pH of the bath and cloth must be rendered acidic when the enzyme is later used.

The hardness of water used, and particularly the presence of calcium salts, has an effect on starch and may render it into insoluble form, causing spots or streaks on the goods. As this may occur in sizing as well as desizing of goods, water used for processing should be soft or water-softeners should be used.

Zinc chloride, which is sometimes used as a deliquescent in sizing materials, is said to have an inhibitory effect on enzymes.

In cotton bleacheries, the practice is to singe the cloth and then pass it through a bath which both quenches possible sparks and contains an enzyme. If the singed material moves relatively slow through the bath, the temperature of the bath is apt to be higher than desirable for the enzyme; this is taken care of by using a moving bath fed by storage tank, pump and return as against a stationary bath. Some bleacheries use sulfuric acid as a desizing agent (it is cheaper than enzymes); however, as acid is destructive to cotton, the cloth must be washed and the acid neutralized.

The materials used for sizing of warps are very often the very materials used in finishing the cloth after bleaching and dyeing; it seems a waste of material to remove it previous to dyeing and add it after dyeing. Perhaps the future will reveal some method of retaining sizing materials through to finished cloth without hindering or hampering dyeing processes. Following in line with recent practice in wool processing, where the synthetic material used for oiling the wool fiber preparatory to the manufacture of yarn serves in the dual role of a detergent when the cloth is scoured, perhaps some of the products needed in later processes may be incorporated when the warp is sized, the ideal being the incorporation of the specific desizing agent needed for the size used.

# TRICKS of the Trade

Edited by PROF. KENNETH S. CAMPBELL
Chemistry and Dyeing Department, North Carolina State College School of Textiles

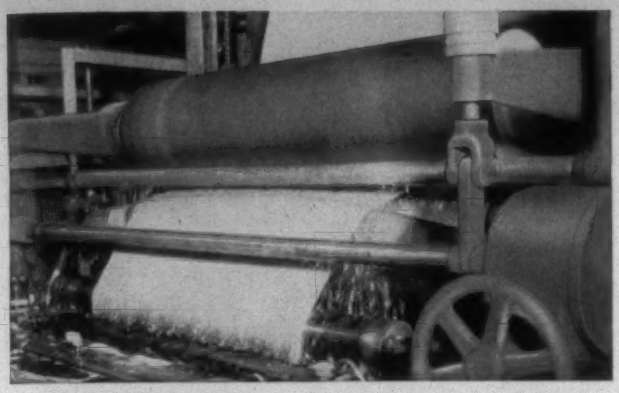
## To Burn or Not to Burn

*Question*: We have heard a great many claims made for a great many products, and because we have seen so many of these products fall far short of the claims we are inclined to be skeptical of much that we hear concerning new chemicals and processes. This may be a healthy attitude but unfortunately it leaves us not knowing what to believe about a product or treatment that we have not had an opportunity, or are not equipped, to evaluate for ourselves. To come to the point, we are currently interested in flameproofing methods, especially of the durable variety, if any. We would appreciate any information of an unbiased nature that you can offer on the subject.

*Answer*: We have the feeling that over-enthusiasm in the advertising department is sometimes but not always to blame for statements made in connection with a product or process which do not measure up when compared with the results of practical tests; lack of uniform test methods and lack of agreement as to definition of terms can also account for the considerable discrepancy which too often exists between what the advertiser claims and what the user believes he is getting. This is particularly true in a field such as flameproofing where, for example, there can be disagreement on what constitutes durability of treatment, on what is meant by an "appreciable" change in the physical characteristics of the fabric, and even on what constitutes hazardous flammability.

A flameproof fabric should be of such character that, after contact with an open flame, flame will not be propagated across its surface (any organic fibrous material will char if it becomes hot enough). In carrying out a standard test the character of the flame, the time of contact and the position of the test specimen are stipulated, and results are in terms of char area, and time of after-flame and after-glow. Such tests are useful for specifications and for comparison purposes. The simple match test, in which a lighted match is held under the bottom edge of a fabric suspended vertically, will usually give a pretty clear idea of whether the fabric has been flameproofed and how well.

Another and knottier phase of the flammability problem is that of determining if a safety hazard exists due to the



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inflammable nature of a particular fabric e. g., brushed rayons, chenilles, marquisettes, etc. Consistent rate-of-burning data are extremely difficult, if not impossible to get, yet it must be had before any flammability legislation can be made on a sound basis. If national legislation were passed it would probably automatically bar certain types of fabric from interstate commerce unless flameproofed. This would raise at once questions of definition, of durability, and cause the manufacturer to think seriously about the effect of flameproofing on the hand of his soft, fleecy, or sheer fabrics.

Non-durable flameproofing treatments, using water-soluble substances such as ammonium chloride, diammonium phosphate, borax and boric acid, etc., have been known and used for a great many years. More recently ammonium sulfamate (the base of Du Pont's "Fire Retardant CM") has come into use. All of these are effective, fairly cheap, comparatively easy to apply, and have but slight effect on the hand of the fabric; their drawback lies in the fact that a light rinse in water, or a good rainstorm, will remove them. For a number of fabric end-uses this doesn't matter.

One of the earliest attempts at durable treatment on a commercial scale was a process which consisted essentially of precipitating tin oxide within the fiber by a two-bath method. Although said to have been used successfully in England, it was expensive, of questionable durability and suffered from very bad afterglow—the entire fabric was likely to be consumed by flameless combustion. A process utilizing the deposition of tin and iron oxides, plus a chlorinated paraffin to limit afterglow, was patented in this country in the '30s but the process was awkward and apparently not used to any extent. Another patent called for the dispersion of one or more metallic oxides in a solvent solution of chlorinated paraffin and impregnation of the cloth with this mixture. It was soon afterward discovered that antimony oxide was by far the most effective and practical oxide for the purpose; this forms the basis for the Hooper "Fire Chief" treatment for duck. Many millions of yards of army tentage and duck for other purposes were treated by a modification of this method during the war to produce "fire, water, and weather resistant" duck. While this finish was very durable and in most cases performed adequately, a large add-on was required (about 50 per cent) and if applied to lighter goods than tentage the effect on the hand of the goods was necessarily great, consisting as it did of wax and pigment. Attempts that were made to apply this type of finish to clothing fabric indicated that if certain resins were added to the formulation resistance to removal in commercial laundering was very high; however the disadvantage of poor hand remained.

A comparatively recent flameproofing treatment is Bancroft's "BanFlame" which by the action of phosphoric acid and urea apparently forms the ammonium salt of a phosphate ester of cellulose. It gives excellent flameproofing without noticeable effect on hand but has a tendency to embrittle the fiber, thereby lowering tear strength, and will withstand washing in non-alkaline detergents but not in soap; it is not affected by drycleaning. One of the most recent and most promising "durable" flameproofing compound is Du Pont's "Erifon" (read it backwards) which is a solution of titanium and antimony salts. It will remain effective after a great many dyrcleanings or home launderings, probably more than the fabric would ever receive during its lifetime, and does not stiffen nor change the draping qualities of the fabric. However, its disadvantages are that it will not withstand the acid scour ordinarily given in the course of a commercial laundering, and, so far, is relatively quite difficult to apply properly.

It can be seen that, especially in the field of flameproofing, claims need careful qualification and definition of terms is essential. The perfect flameproofing treatment is still a long way off.

### Heat Setting of Nylon

*Question*: Although we are not at present finishing nylon fabric we expect to get into this type of work when and if nylon yarn becomes more readily available. In anticipation (perhaps premature) of this we would like some general information on the problem of stabilizing nylon fabric, especially with respect to possible methods and their effectiveness.

*Answer*: Nylon is unique in that it has the property of responding to fairly high temperatures by a rearrangement of the longchain molecules making up the fiber, with the net effect that an arrangement approaching that of least strain is obtained. This means that subsequent deformation of the yarn or fabric will have more or less negligible effect on its dimensions provided that the conditions (of heat and swelling) which were used in the setting operation are not exceeded. This property is applied practically, for example, in the preboarding of nylon hose; the hose are placed on forms in a closed chamber and subjected to saturated steam at sufficient pressure to give a temperature ranging from 250 to 268° F. for one to three minutes. Thereafter, since dyeing, finishing, or laundering procedures could hardly exceed these conditions, the shape set in preboarding is maintained. The setting of woven or knitted fabrics conforms to the same principle but presents distinctly different problems in mechanical handling. Also, because the closed autoclave system is limited to comparatively small lots at a time it is highly desirable to use a more productive method; it is, however, the preferred method used by tricot finishers because of the nature of tricot fabric. In addition to saturated steam, boiling water and dry heat can bring about the required setting. Certain nylon fabrics have been made dimensionally stable by boiling in a jig for a long time to remove all residual shrinkage. Continuous methods currently being used are based upon the use of heated rolls, or hot air, or both, and the construction of such machines also depends upon whether the fabric is to be set to a predetermined size or shape. One type of hot roll machine is designed so that the goods pass over hollow rollers through which "Dowtherm" (a high temperature heat transfer fluid) is flowing. Since these rolls are in the neighborhood of 450°F, which is close to the melting point of nylon (482° F.), the cloth speed is such as to give a two to 15-second contact only. Hot roll setting is said to give a fabric with a softer and fuller hand than steam or water setting. If the fabric is to be held to a certain width while setting, a gas heated tenter housing of one type or another is generally employed.

It is frequently necessary to scour the nylon fabric carefully before setting since any grease, oil, or other foreign matter, if present during heat treatment, may be extremely difficult to remove afterward. Unless the heat setting has

been non-uniform it should have comparatively little effect upon subsequent dyeing properties.

### Moth-Resistant Woolens

*Question*: I am working for a manufacturer of men's clothing. We are interested in mothproofing our woolen fabrics used in our clothing. I would appreciate any information on mothproofing with respect to the following: chemicals used, application, practicability.

*Answer*: There are a number of ways in which woolens can be protected against the clothes moth and other insect pests—damage from which, incidentally, is estimated at several hundred million dollars annually. There is no one best way since this must always depend upon the particular circumstances involved, such as whether temporary or permanent protection is required, cost limitations, facilities for application, stage of fabrication at which protection is desired or may be most conveniently applied, etc.

Mothproofing agents may work by virtue of being a stomach poison like Eulan CN (General Dyestuff Co.), Mitin FF (Geigy Co.), and the fluorides and silicofluorides, or as a contact poison like DDT. A chemical method (Boconize) operates by modifying the disulfide cross-linkages of the wool fiber, rendering the wool indigestible to moth larvae. All except DDT provide good resistance to drycleaning, while Eulan and Mitin show excellent resistance to all wet processes. The latter two products are most economically applied in the dyeing process and are absorbed by the fiber in much the same way as a dye; they do not affect the shade of the dyed goods, they are fast to light and weathering, and they impart no odor to the goods.

The fluorides and DDT may be applied by impregnating the cloth with their solutions or by spraying, although the latter method may too easily result in incomplete coverage. DDT applied from solvent solution or emulsion is effective in remarkably small amounts so that if approximately one per cent is applied to the goods there may still be enough left to protect (as little as 0.15 per cent) after three or four washings or drycleanings. It should be obvious that if temporary protection for stored goods is all that is necessary the cheapest product that can be practically applied will suffice; on the other hand, if protection plus the sales appeal of permanent mothproofing is desired, a durable treatment is indicated.

## Colorimetry Covered In New N.B.S. Booklet

Scientists and technicians concerned with color measurement will find much helpful information in a new booklet, *Colorimetry*, recently published by the National Bureau of Standards and now available from the U. S. Government Printing Office.

Colorimetry is of vital importance in modern mass-production methods. Only through the use of a grading system based on determination of color can the textile manufacturer produce goods of uniform color at a price low enough to sell. For the past 20 years, the National Bureau of Standards has played a leading part in establishing practical working standards of color and in setting up and administering color tolerances. As a result, conformity to a color requirement can now be determined with the same assurance as mechanical properties. The present booklet describes the standards and measurement methods developed by the bureau in this field, giving the basis for each technique and showing clearly how one method supplements the other. Chapters cover the following topics: the standard observer; illuminants and co-ordinate system; small-difference colorimetry; material standards of color; one-dimensional color scales; and general methods.

Circular C478, *Colorimetry*, by Deane B. Judd, 56 large double-column pages, illustrated, 30 cents a copy, is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Remittances from foreign countries must be in United States exchange and must include an additional sum of one-third the publication price to cover mailing costs.

## 1949 Dye Sales Below Previous Year

In 1949, 136 million pounds of dyes, valued at 142 million dollars, were sold as compared with the 187 million pounds valued at 164 million dollars sold in 1948, the Tariff Commission reported in its preliminary statistics on United States production and sales of dyes in 1949. The total 1949 output of dyes was 139 million pounds—31 per cent less than 1948's total of 201 million pounds.

Grouped by color index number, the production of dyes was 100 million pounds in 1949 compared with an output of 152 million pounds in 1948; grouped by foreign prototype number, production of dyes was off last year to 20 million pounds as compared with the 28 million pounds produced in 1948; 18 million pounds of ungrouped dyes were produced last year as compared with 1948's total of 22 million pounds.

Of the total output of dyes in 1949, 86 per cent were accounted for by four chemical classes. These were: azo dyes, which accounted for 41 per cent of the total; anthraquinone vat dyes, 19 per cent; indigoid dyes, 13 per cent, and sulfur and 13 per cent of the total was produced by acid dyes (18 in 1949 than in 1948.

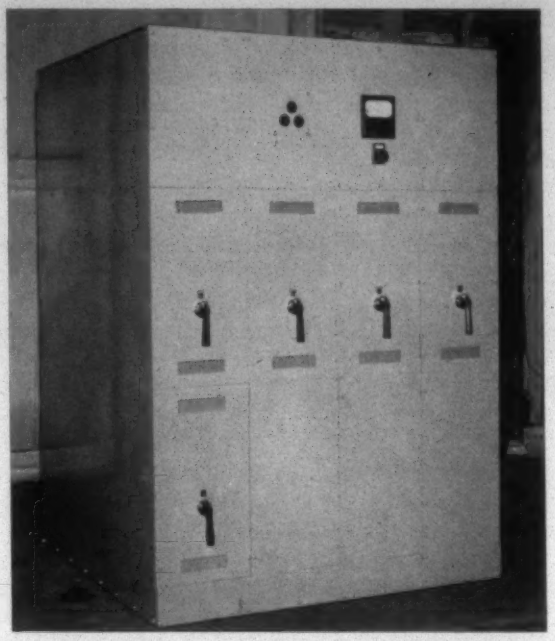
By class of application, vat dyes in 1949 (45 million pounds) produced 32 per cent of the total of all dyes; direct dyes (30 million pounds), accounted for 22 per cent; and 1 3per cent of the total was produced by acid dyes (18 million pounds).

Among the individual dyes produced in large volume are synthetic indigo, which totaled 13.4 million pounds in 1949 compared with 22.2 million pounds in 1948; sulfur black, 9.4 million pounds in 1949 compared with 13.5 million pounds the year before and 32.4 million pounds in 1947; direct black ew, 6.4 million pounds in 1949 compared with 14.1 million pounds in 1948; and anthraquinone vat jade green, 5.3 million pounds in 1949 compared with four million pounds in 1948.

## Southeastern A.A.T.C.C. Plans Fall Meeting

The Southeastern Section of the American Association of Textile Chemists and Colorists will hold its Fall meeting in LaGrange, Georgia on Saturday, Sept. 23. Beginning in the afternoon, the technical and business session will be held in the Callaway Auditorium. The technical session will feature a symposium on detergency. A number of operators and suppliers have been invited to sit on the panel.

The banquet will be held in the Callaway Auditorium and will be followed by an after-dinner program by Larry Livingston of Du Pont.



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# TEXTILE MILL SWITCHBOARDS

Part Four of a Series by JAMES T. MEADOR

AS promised you in the April issue, we are continuing our discussions concerning this subject by going into the matter of an outdoor switch group at Manetta Mills, Monroe, N. C., where R. A. Willis is the general manager, O. A. Sullivan the superintendent and John Carroll the master mechanic.

This is a somewhat similar case to that discussed last time, except that the capacity of the Duke Power Co. transformer bank is lower, with correspondingly lower short circuit capacity and consequently lower requirements of interrupting capacity on the power service entrance circuit breakers. These exceptions enabled this mill to accomplish a change-over from a combination of both 2,200-volt and 550-volt power to the single type of 550-volt power service as supplied by Duke Power, with a minimum of expense on the main entrance circuit breakers.

This was accomplished by means of using three outdoor, weatherproof, main circuit breakers, mounted side by side on steel arms, between two poles just outside the sub-station fence, with a set of three 3,000-volt, single-pole, hook-stick operated, underhung disconnecting switches acting as the delivery point for the service from Duke Power Company (see photograph). These circuit breakers were obtained with arrangements for dual operation, so that they could be either closed or opened from both the outside by the handles in the covers, and from inside the machine shop approximately 500 feet away, on the back side of the mill, by push button stations, marked "Open" and Close," a separate station for each circuit breaker. And since the main idea of operating these was to have the full control in the machine shop, it was found advisable to mount the operating circuit breakers so that the operating handles would be approximately nine feet above the ground in order to discourage any ordinary attempt at disturbing the power service. A fence is to be used to enclose this arrangement so as to further protect the equipment.

From each one of these circuit breakers, there was extended across the driveway to the building a circuit of three 500,000 cir. mil. cables to a dead end termination, from where a continuation of the circuit was carried into and through the mill to the branch switch group located in the geographical center of this widespread mill. This feeder arrangement provided a total of three feeder circuits to this



Face view of the air circuit breakers in their operating position of approximately nine feet above the ground.

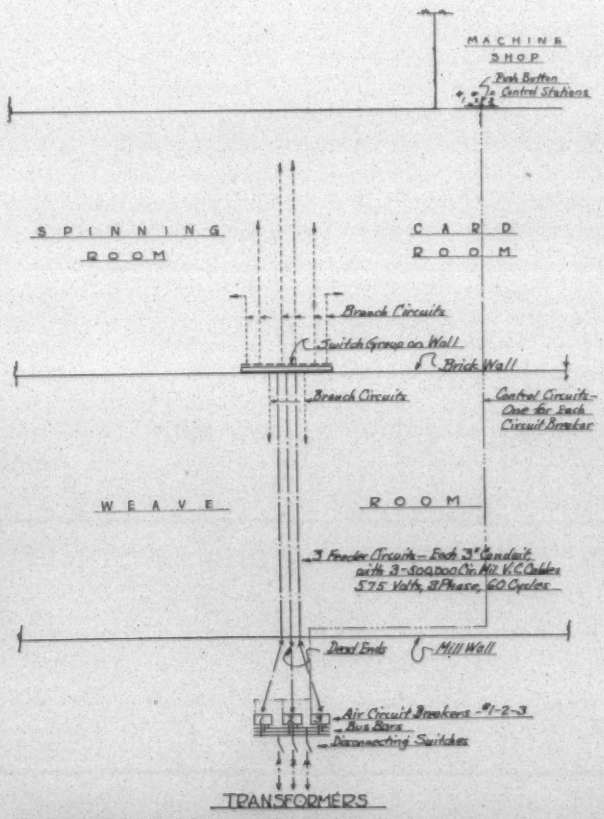



*Fig. 1*—Arrangement of the outdoor-mounted air circuit breakers in relation to the mill building. The disconnecting switches, bus bars and circuit breakers are grouped and mounted on a two-pole arrangement with the center line of the poles 36 inches from the enclosing fence of the Duke Power Co. sub-station. From this point the feeder cables were suspended across a driveway at proper height to clear large trailer trucks, and dead-ended on the mill building, where the connections were made with 500,000-c.m. varnished cambric feeder cable.

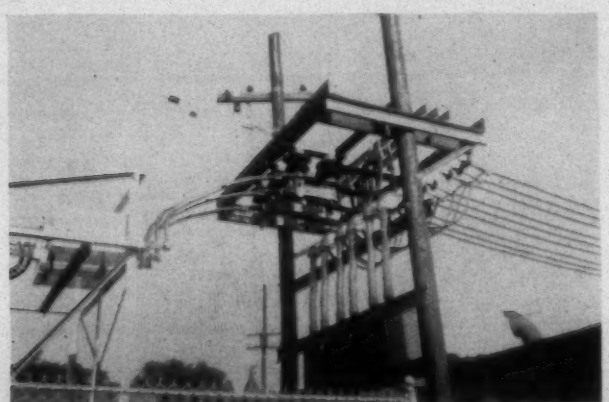
point, from which the branch circuits extended to the various areas which they supplied. Here, again, as mentioned in the April issue of TEXTILE BULLETIN, the factor of voltage drop was taken into consideration, which justified this plan by allowing better circuit characteristics and less line loss (voltage drop) than would have been the case should a switch house have been built on the side of the mill nearest the transformers, and the small branches extended to the load areas. (See sketch for the arrangement employed in this case).

### Flexibility is Big Advantage

The flexibility of this arrangement of outdoor circuit breakers on feeders such as these is practically unlimited in any type of textile plant, provided that proper consideration is taken concerning the amount and balance of the branch load as apportioned among the feeder circuits. For instance, you might find it necessary to have some other arrangement for branch circuit distribution, than that described above, on account of departmental arrangements, etc. That is, you might be able to employ this same outdoor main circuit breaker arrangement to the best advantage, and then have your branch load centers dispersed pretty widely, such as the following: (1) Card Room, Pickers, Vacuum Pump, Machine Shop, Air Compressors, Boiler Room, Elevators, etc. (2) Spinning Power Lighting (feeders to various departments). (3) Weave Rooms, Slashers, Warpers, Spoolers, etc.

That is, instead of having a switch group arrangement, at a central point for all the branch switches in the mill, this would have permitted, in this case, three separate switch groups in accordance with the departmental requirements, yet, the main switches or circuit breakers would still be grouped, as required by the National Electrical Code, although at the transformer bent, instead of in a switch room.

Now, you have noticed that in both this case, and the one previously discussed, that these circuit breakers were located right at the transformed bent, in fact, right "under the guns" of the transformers themselves, without the protective benefits of the characteristics of long runs of cable which is helpful in reducing the short circuit in-rush of the transformers. Next time, we hope to bring you a case where the reactance of a fairly long line of open, slow-burning wire of many years age was suitable both as a feeder and, due to its characteristics as reactance, etc., was very effective in reducing the short circuit interrupting requirements of the circuit breakers.



**General arrangement of outdoor set-up for the complete installation of the single-pole, hook-stick operated, disconnecting switches, with the bus bar distribution system supplying the three circuit breakers. The circuit breakers are mounted upon steel channels between the poles, which were set ten feet apart.**

### Switch Group Mounted on Wall

In this case, as you will see by examining Fig. 1, the grouping point of all the branch circuit switches was made at the most central point in the mill, at which point the three feeders from the circuit breakers were terminated in three separate groups of feeders for certain departments. They were not connected all to the same common terminal point, but, by means of the branch switches were channelled right to their predetermined loads.

These grouped switches were mounted on a back board built against the uneven brick wall, made up of dressed 2 x 8 timbers spiked horizontally onto dressed 2 x 6 timbers vertically fastened to the wall by means of half-inch through bolts. After the wood work was completed, the whole face of it was covered with quarter-inch asbestos rock board secured by means of large wood screws. This not only made an excellent surface for mounting the switches, ducts, etc., necessary for such an arrangement, but, also made the Fire Insurance Underwriters very happy.

### Control Circuit Provides Flexibility

With so many people nowadays demanding more and more flexibility in equipment design, etc., to permit more reduction in manufacturing costs, the remote control arrangement shown here, with the "open and close" push button stations located at remote points, as in this case, in the machine shop where they would be directly under the supervision of the master mechanic, allows for as much flexibility as would ordinarily be desired. And, along with this feature of operation, there was installed another convenience: a three-phase bank of ground detector lights on the same panel with the push button stations and their lights, which gave the benefits and advantages of full control over the entire power supply of the mill at the point where it is most needed, with the circuit breakers away on the other side of the mill at the power service entrance where they were needed.

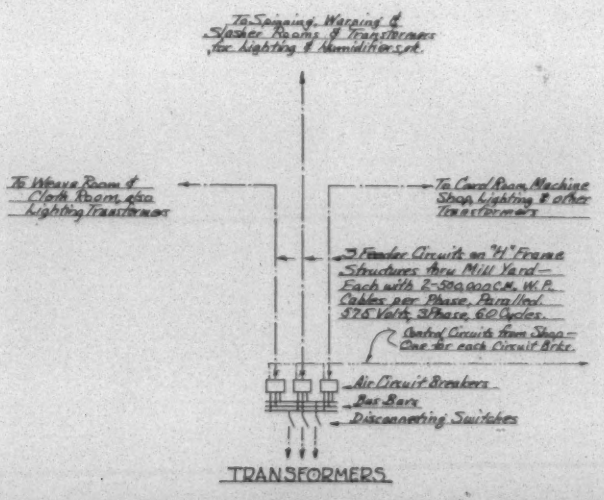



***Fig. 2*—A set-up more or less similar to *Fig. 1*, except that this represents a possible layout using the same type of weatherproof air circuit breakers, mounted and connected in the same manner, but with the destinations of the various feeder circuits widely scattered, as would be possible where there are three separate processing areas, as shown. This is just another of the flexible arrangements possible with this type of equipment, with the control stations mounted where most convenient for the operation of the mill as a whole, or for each processing department individually.**

# SAG vs. BELT LENGTH

By F. H. RUMBLE, Texrope Drive Department, Allis-Chalmers Mfg. Co.

NEWLY installed sets of V-belts that sag—some more noticeably than others—very often pose a question in the mind of the plant engineer. That question is, "Will pulling the sagging belts tight overstretch the others?" Actually, a sagging belt is no cause for anxiety. Too often the relation between sag and belt length is misunderstood. This leads to an exaggerated idea of the difference in length between V-belts on a multiple belt drive.

To clarify this situation, it should be pointed out that measurements of V-belts are made on grooved sheaves in motion under normal operating tension. Each belt is stamped—following the name brand—with an inspection number. This number represents the plus or minus tolerance of the belt. Let us, for example, say that 50 has been selected as the base number. Then, belts stamped with numbers below 50 are minus tolerances; those identified with numbers over 50 are plus tolerances. Each number represents a difference of one-tenth of an inch. The maximum length difference allowed between the shortest and longest belt in a matched set is only one tenth of an inch per 100 inches, or one tenth of one per cent. Consequently, stretching the shortest belt of a set this small amount will not harm it.

In considering the length between the tangent points of the sheaves on a drive, the accompanying table gives the differential in length between a belt which is tight and one which sags on the same drive. Values listed are for 180° arc of contact on both sheaves and would vary slightly for other ratios.

Any reference by an operator to belts being "four or five inches longer than other belts on the drive" is usually exaggeration based on a misunderstanding of the relation between sag and belt length. Actually the amount of sag is very misleading as can be seen by the table. On a center distance of 100 inches a sag of two inches will appear to be very drastic, but it can be removed by only 0.054 inches of take-up on the motor base—less than one-sixteenth inch!

Consideration should be given to apparent differences in belt length on V-belt drives caused by sheave grooves which have worn down unequally. Where such a situation exists, regrooving the sheaves or replacing them with new ones would be the most economical procedure.

TAKE-UP TABLE (In Inches)

| Centers in Inches | (Sag (In Inches) | | | | | | |
|---|---|---|---|---|---|---|---|
| | ½ | 1 | 2 | 3 | 4 | 5 | 6 |
| 20 | .037 | .130 | .513 | 1.08 | ---- | ---- | ---- |
| 30 | .025 | .096 | .343 | .78 | 1.51 | ---- | ---- |
| 40 | .010 | .074 | .240 | .59 | 1.03 | 1.61 | ---- |
| 50 | .008 | .028 | .20 | .44 | .83 | 1.27 | 1.86 |
| 75 | .004 | .018 | .17 | .30 | .60 | .87 | 1.25 |
| 100 | ---- | .025 | .054 | .12 | .40 | .66 | .94 |
| 200 | ---- | ---- | .03 | .06 | .21 | .37 | .42 |
| 300 | ---- | ---- | ---- | .035 | .16 | .29 | .35 |

## New Materials Handling Guide Available

Handbook of Material Handling with Industrial Trucks, a 72-page practical guide for the analysis of material handling operations and the application of the unit-load method with power-operated industrial trucks and accessories, has just been published by the Electric Industrial Truck Association. This book, entirely new in text, illustrations, charts and diagrams, together with engineering data, supplants the former *Materials-Handling Handbook*, also published by E.I.T.A., which ran through six editions and which was regarded as the standard authority on material handling practices employing industrial trucks.

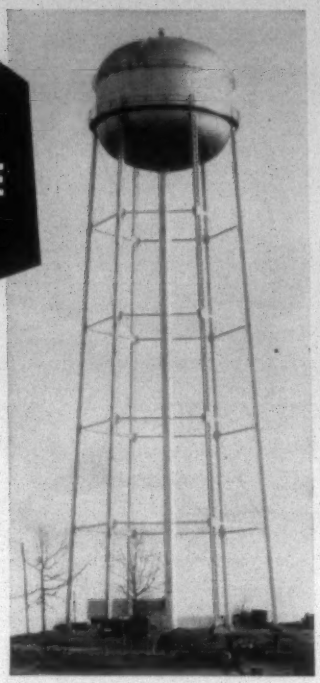
Divided into four sections, the new handbook contains: (1) The Evaluation of Industrial Truck Handling; (2) Material Handling Management, with sub-sections devoted to the preparation and use of flow process charts, handling operations in production, handling in storage, the use of unit loads in storage, with layouts, commodity and capacity factors, etc.; (3) The Organization of an Industrial Truck System; and (4) Practical Truck Engineering.

Sections of the book describe the different types of industrial trucks in use; their integration of operation with other material handling systems; unit load determinations and patterns; how to charge and to change storage batteries; how to keep battery records; how to measure handling costs; routing and dispatching methods, and how to train industrial truck operators.

Different types of skids, pallets and other load carriers are illustrated and described, while the book also contains pictures showing actual applications of industrial trucks in handling and storage operations in practically every kind of industry, including automotive, bottling, canning and ceramics down through the metal trades, the paper and printing and the rubber industries. Single copies of the book are sold for $1, with special quantity prices on application. Executive officials of any industry of business, making application on company letterhead to The Electric Industrial Truck Association, Department PR, 3701 North Broad Street, Philadelphia 40, Pa., will be supplied a copy of the handbook with the compliments of E.I.T.A. This same offer of a courtesy copy is extended to deans and professors of engineering colleges and universities.



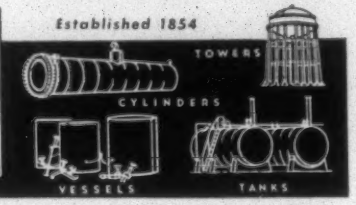
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Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

# PERSONAL NEWS

Frank L. Asbury has been appointed manager of the recently-created cotton spinning division of Burlington Mills Corp. which is comprised of plants at Kings Mountain, Smithfield and Gastonia, N. C. Mr. Asbury is a graduate of Georgia Tech in textile engineering and for a number of years was associated with plants in Georgia and Alabama before joining Bur-Mil in 1948. . . . R. L. Poovey, former division manager of the international division, has been transferred to the spun weaving division as assistant division manager, succeeding Mr. Asbury. Mr. Poovey has been connected with Burlington Mills for 15 years. . . . Recent promotions at the Galax, Va., weaving plant of the decorative fabrics division include those of Greer Siceloff from first shift weave room overseer to general overseer of weaving and preparation; C. O. Waugh, from second shift weave overseer to first shift weave overseer; J. B. Jones, from third shift weave overseer to second shift weave overseer; Dan Bartlett, from first shift weave second hand to third shift weave overseer; L. W. Douglas, from second shift weave second hand to first weave second hand; Howard Weddle, from third shift second hand to second shift second hand; and T. R. Martin, from loomfixer to third shift weave second hand. . . . William L. Johnson has been made general overseer of the Oxford (N. C.) Plant of Burlington Mills, which plant produces spun rayon. . . . Robert Short, who has been general overseer of carding and spinning at Oxford, has been transferred to Fayetteville, N. C., where he is general overseer of carding at the Lakedale Plant of Burlington Mills.



William A. Hewitt recently has been appointed Southern representative for Manton-Gaulin Mfg. Co. of Everett, Mass., manufacturer of homogenizers for preparation of starch size in textile plants. Mr. Everett has had many years experience in the textile field and previously represented Corn Products Sales Co. He is making headquarters at McDaniel Heights Apartments, Greenville, S. C., and will cover the entire South in a sales and advisory capacity.

Frank H. Leslie of New York has been elected president of Clinchfield Mfg. Co., Marion, N. C., succeeding the late W. Lester Morris. Mr. Leslie, a general partner in Leslie & Co., selling agency, has been a vice-president of Clinchfield for a number of years. . . . G. A. Morris has been elected vice-president of Clinchfield in addition to his duties as secretary and assistant treasurer, and was named to replace his late brother as a director.



Edmund R. Roper, for the past ten years connected with the Lyman (S. C.) Division of Pacific Mills, has become associated with the Southern Division of Dexter Chemical Corp. and will make his headquarters in Greensboro, N. C., where he will operate under the direction of Leonard Slesinger, Southern manager for Dexter. Mr. Roper is a graduate of Clemson (S. C.) College, where he majored in textile chemistry, acquiring a B.S. degree.

Edward T. Taylor, secretary and assistant treasurer of North Carolina Finishing Co., Salisbury, N. C., is receiving congratulations on his recent marriage to Miss Elizabeth Hardin, also of Salisbury.

Dr. Edward Abrams, textile consultant of New York, has been appointed head of the textile section of the Southern Research Institute, Birmingham, Ala. Under Dr. Abrams' direction, the institute is planning an expanded service program for the textile industry.

Wilbert J. Carter, Raymond G. Emery and Joseph H. Sutherland have been appointed executive vice-presidents of J. P. Stevens & Co., Inc. Mr. Carter is in charge of the company's Carter manufacturing group with headquarters at Greensboro, N. C., Mr. Emery is chairman of the manufacturing committee and executive officer of the group of mills with headquarters at Greenville, S. C., and Mr. Sutherland is in charge of the rayon sales division with headquarters at New York. All are directors of the company. . . . R. Carter Henry has been appointed manager of Piedmont (S. C.) Mfg. Co. and Wallace Mfg. Co. at Jonesville, S. C., subsidiaries of the Stevens firm, succeeding the late V. J. Lipscomb. . . . Henry G. Rollins has been named manager of the Ragan spinning plant of the firm at Gastonia, N. C., in addition to his duties as manager of Stanley (N. C.) Mills Division and Cleveland Cloth Mills Division, Shelby, N. C.

Max E. Binz, president of M. E. Binz Co., Ltd., has announced that he is planning to retire from active work in the textile industry because of his health. Mr. Binz will remain as president of the Binz company for a few months and thereafter continue in an advisory capacity as one of its directors. He has resigned as vice-president and director of Duplan Corp., of which the Binz firm is a subsidiary. . . . Ralph Hood, who for a number of years has acted as a consultant for textile companies in the United States and Canada, has been appointed general manager of the Binz company.

Harlan C. Pruett has resigned as plants manager for Burlington Mills Corp. in the High Point, N. C., area to become division manager of Textron Southern, Inc., with offices at Anderson, S. C.

Edwin G. Speir, who is in charge of all gray cloth production in the United States and Canada for United Merchants & Manufacturers, Inc., is resigning from that position July 30. Mr. Speir joined the firm in 1940 as manager of the Ashland Corp. at Jewett City, Conn. After three years he was transferred to New York and given the responsibility of all gray production which position he has since held except for two years' duty in the Navy.

Arthur E. Tousignant has been promoted from assistant general manager to general manager of Spofford Mills, Inc., Wilmington, N. C.



Edward C. Horner, who has been assistant superintendent of Sterling Cotton Mills, Inc., Franklinton, N. C., has resigned that position to become superintendent of Enterprise Mfg. Co. at Coleridge, N. C. At Enterprise he succeeds W. D. Hannon, who is retiring. Mr. Horner is immediate past chairman of the Southern Textile Association's Eastern Carolina Division.

James L. Rye, general overseer of carding at the Porterdale, Ga., plant of Bibb Mfg. Co., last month completed his 55th year of active employment with the company. . . . John S. Turner, agent for Bibb at Columbus, Ga., has rounded out 30 years of continuous work with the firm.

F. W. Sell, formerly overseer of spinning and twisting for Imperial Yarn Mills at Belmont, N. C., has joined American Yarn & Processing Co. as an overseer at the Nel-

son Plant, Whitnel, N. C. . . . J. E. Binning, formerly superintendent of textile manufacturing for the State of Iowa at Fort Madison, is now assistant to the superintendent at Nelson. . . . Archie B. Johnson, Jr., previously with Burlington Mills Corp. at St. Pauls, N. C., has been named assistant superintendent of the A.Y.P. Adrian Plant at Mt. Holly, N. C.

E. M. DeVine of Rhyne-Houser Mfg. Co., Cherryville, N. C., has been transferred from the No. 1 Plant to the No. 2 Plant as overseer of carding and spinning.

Donald Comer, chairman of the board of Avondale Mills, Sylacauga, Ala., is chairman of a hospital fund campaign seeking to raise money for erection of a $750,000 Negro hospital at Birmingham, Ala.

Robert Barrett, a member of the faculty at Durham (N. C.) High School for the past four years, has been appointed training director of Erwin Mills, Inc., Durham.

D. M. Williams has joined Carolina Mills, Inc., in an executive capacity. Carolina Mills operates plants at Newton, Maiden and Huntersville, N. C. Before joining Carolina, Mr. Williams was general manager of Calvine Cotton Mills, Inc., and Marshall Mfg. & Processing Co., Charlotte, N. C., subsidiaries of Leading Embroidery Co. of North Bergen, N. J.

Giles E. Miller has been elected president of Texas Textile Mills, Inc., Dallas, Tex., succeeding his father, Clarence R., who becomes chairman of the board. Other new officers are Bryan C. Miller, vice-chairman of the board; A. M. Scott, honorary vice-chairman of the board; and Connell R. Miller, executive vice-president.

Marion A. Prowell, for the past 13 years attached to the Atlanta, Ga., regional office of the National Labor Relations Board, has become associated with Frank A. Constangy of Atlanta in the practice of law. The Constangy firm specializes in representation of employers in labor relations matters and has represented many Southern textile concerns.

William F. C. Ewing, formerly executive vice-president of Alexander Smith & Sons Carpet Co., has succeeded Frederick B. Klein, resigned, as president of the company. Mr. Klein, who resigned because of ill health, continues as chairman of the board. Mr. Ewing has been associated with the firm since 1921, when he joined the company as a salesman.

Dr. Lars A. Welo, physicist in the Southern Regional Research Laboratory of the U. S. Department of Agriculture at New Orleans, La., has retired from government service. For the past five years Dr. Welo was engaged in research on the physical properties of cotton.



Fred W. Phillips of Greenville, S. C., formerly with New York & New Jersey Lubricant Co., has joined the sales force of Cecil H. Jarrett Co., Newton, N. C., producer and distributor of chemicals and supplies.

William O. Fisher has been appointed Canadian sales representative for Crompton & Knowles Loom Works with headquarters at Worcester, Mass. A graduate of Phillips Academy and Harvard, Mr. Fisher served with the Army Corps of Engineers during the war and joined the sales office of Crompton & Knowles at the end of the war.

Cyrus M. Neuner of Barnesville, Ga., has been named manager of Aldora Mills, Barnesville subsidiary of General Tire & Rubber Co. of Akron, Ohio. Mr. Neuner was graduated from Georgia Tech in 1942 with the B. S. degree in mechanical engineering. He succeeds L. E. Macomber who resigned recently on account of his health. . . . William Vecsey has been named superintendent of General Tire & Rubber Co's. affiliated textile plant at Porto, Portugal. Mr. Vecsey has been connected with the firm for 17 years.



Robert E. DeLapp, Jr., a native of Reidsville, N. C., and a recent graduate in textile manufacturing at North Carolina State College, has been added to the technical staff of the textile sales division of Keever Starch Co. For the time being Mr. DeLapp is in the division office at Greenville, S. C. Eventually he will be assigned to field work on new Keever products.

Charles S. Clegg, president and treasurer of Globe Mills Co., Mount Holly, N. C., has been appointed chairman of a group which plans to establish a living memorial to the late Joseph H. Separk, pioneer textile industrialist of Gastonia, N. C., who died April 30.

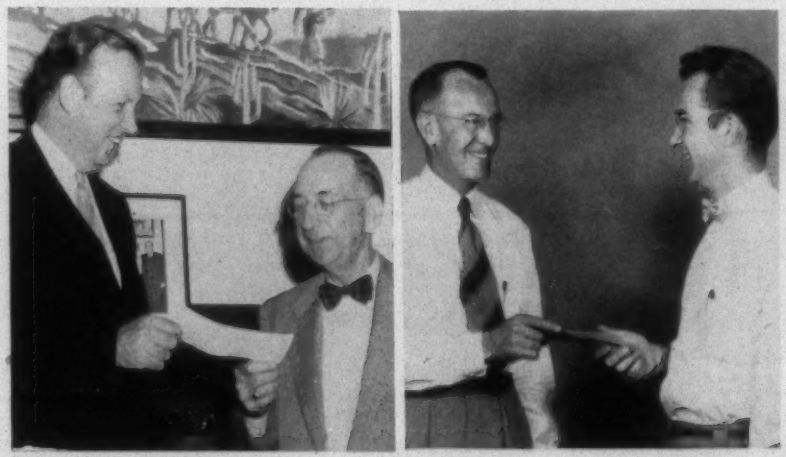
T. Lynwood Smith, personnel director for Adams-Millis Corp. and Highland Cotton Mills, High Point, N. C., has been elected president of the High Point Rotary Club. . . . S. P. Stowe, Jr., assistant secretary and assistant treasurer of Climax Spinning Co. and Majestic Mfg. Co. at Belmont, N. C., has been elected president of the Belmont Rotary Club.

Robert B. Low, former president of Clarence S. Brown & Co., has joined Dan River Mills, Inc., to assist W. J. Fullerton, director of fabric development and planning. Mr. Low was associated with Clarence S. Brown & Co., specialists in quality yarn dyed and novelty fabrics, for 25 years. His many years of experience in the textile field have given him a wide background in merchandising of men's, women's and children's garment manufacturers, jobbers, wholesalers and retailers as well as a comprehensive knowledge of styling.

John B. Trotter has been named by Monsanto Chemical Co. as general branch manager of its Southern sales district with headquarters at Birmingham, Ala. A native of Birmingham, Mr. Trotter has been associated with the chemical industry since 1927. He has served as assistant branch manager in charge of Monsanto's Charlotte, N. C., office and as assistant general branch manager at the Birmingham office.

William A. Jones, formerly assistant to the superintendent of the spinning department of American Enka Corp., Enka, N. C., has been appointed superintendent of the finishing department there. He succeeds Lawrence Hart, who has been transferred to the newly formed research department.

W. A. Pridmore, formerly overseer of weaving, has been promoted to assistant superintendent at the Brookford (N. C.) Mills unit of A. D. Julliard & Co., Inc. Before joining Brookford Mr. Pridmore



**THE CENTURY SPINDLE, first introduced by H & B American Machine Co. at the American Textile Machinery Exhibition, received its name from J. Colby Lewis, general manager of J. & P. Coats (R. I.), Inc., and J. L. Huggins of Pisgah Mills at Brevard, N. C. The co-winners of the contest shared the $500 prize, and each has been awarded $250. At *left*, William A. Sipprell, Jr., president of H & B, presents a check to Mr. Lewis, and at *right*, William E. Conlon, manager of the H & B office at Charlotte, N. C., gives Mr. Huggins his.**

**Prior to the show H & B decided that the spindle-naming contest would be open to all executives and employees of established spinning, throwing and weaving mills. A great many entries were dropped in the contest box at the company's booths, but many more were mailed to the plant between the ending of the show and the close of the contest May 30.**

was with Judson Mills at Greenville, S. C., and Greenwood (S. C.) Mills. . . . John W. Bunton, formerly with Greenwood Mills, is now the overseer of weaving at Brookford.

Frederick C. King has been appointed technical representative of the synthetic fibers department, Carbide & Carbon Chemicals Division, Union Carbide & Carbon Corp. Prior to coming with Carbide, Mr. King was associated with Burlington Mills. He was previously connected with E. I. du Pont de Nemours & Co., Inc.

David J. Richards, vice-president in charge of domestic sales at E. F. Houghton & Co., Philadelphia, has taken over the duties of the late George W. Pressell and will be vice-president in charge of sales and advertising, both domestic and foreign. He has been with the firm for more than 30 years.

# OBITUARIES

**W. Malcolm Brady,** 53, well-known textile executive and a member of the board of directors of Burlington Mills Corp., died July 7 at Greenwich, Conn. He was one of the pioneers in the development and growth of the rayon textile industry in this country. He was affiliated with J. P. Stevens & Co. from 1924 to 1940, when he joined Bur-Mil as executive merchandising co-ordinator in charge of spun rayon fabrics. Under his leadership the firm's spun rayon fabric operation expanded in both manufacturing and merchandising. Surviving are his widow, four children, a brother and a sister.

**Spencer L. Carter,** 77, vice-president of Virginia-Carolina Chemical Corp., died this month at Richmond, Va. Surviving are two daughters.

**Laurie C. Dickson,** 64, Southern representative for the yarn division of Turner Halsey Co., died June 30 at his home in Charlotte, N. C. For 12 years he was vice-president and treasurer of Stevens Yarn Co., with headquarters in Charlotte. Among survivors are his widow and a son.

**Henry I. Harriman,** 77, who during his career was actively associated in the management of the old American Loom Co. and Stafford Co., died recently at Needham, Mass. Surviving are a son and a daughter.

**Valentine J. Lipscomb,** superintendent and general manager of Piedmont (S. C.) Mfg. Co., a subsidiary of J. P. Stevens & Co., died June 21. He had been connected with Piedmont for 11 years, and prior to that was superintendent of Woodside Mills at Easley, S. C. Surviving are his wife, a son, and a sister.

# MILL NEWS

**CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES**

BENNETTSVILLE, S. C.—A new plant for the manufacture of Venetian blind tape was dedicated at Bennettsville July 13 by Russell Mfg. Co., Middletown, Conn. One feature of the opening ceremonies was an exhibit of scientific advances in narrow fabrics. Decorative tapes employing cotton, rayon, and Orlon in new combinations and new constructions were shown for the first time. The South Carolina plant was built for the Russell company on a long-term lease with option to purchase by a group of 80 leading citizens interested in bringing new industries to Bennettsville. Of the most modern construction, the plant will be the largest in the world designed and equipped exclusively for the production of Venetian blind tape.

BELTON, S. C.—Daniel Construction Co. of Greenville, S. C., and Birmingham, Ala., has been awarded contract for construction of a new $2,000,000 rayon weaving mill here for Peerless Mills. The 90,000 square foot plant will be windowless, air conditioned, finished in glazed tile throughout, and equipped with the most modern fluorescent lighting of daylight intensity. Located on a 40-acre site near Belton, this new mill represents the company's first venture in the South. The home office is in New York, and main plant in Pawtucket, R. I. A. C. Fine, president, and H. L. Fine, vice-president, owners of Peerless Mills, have recently reviewed the site in Belton with members of the architectural firm of Lyles, Bissett, Carlisle and Wolff, and with members of the Daniel Construction Co. Work on this project is scheduled to start soon.

WILLIAMSTON, S. C.—Construction will start here immediately on a $1,000,000 addition to the Williamston print cloth mill, a unit of Textron Southern, Inc., which already has numerous other large plants in South Carolina. The expansion will increase the number of looms by more than 54 per cent and will add 27,840 square feet to the existing structures by filling in space between two buildings. G. C. Cromer, general manager and vice-president of Textron Southern, said that the expansion also involved the installation of 11,808 more spindles. The additional 375 looms will bring the total in the plant to 1,059. He said the unit would manufacture print cloth. Daniel Construction Co. of Greenville has been awarded the contract for the addition which will be air conditioned along the same lines as the existing plants.

ROCK HILL, S. C.—Rock Hill Printing & Finishing Co. recently purchased most of the mill village of Gold-Tex Fabrics Corp. The purchase included 19 houses on a site of about three or four acres.

COLUMBUS, GA. — Two floors of the $200,000 three-floor addition to Swift Mfg. Co. have been completed. Both will be used for storage. A third floor, scheduled for completion this year, will be used to centralize production of non-cotton fabrics. A number of new looms, capable of weaving any product that can be woven, have been purchased. Cost of the machinery was not announced.

ARCADIA, S. C.—Approximately 265 houses in the village of Mayfair Mills have been offered for sale to employees. The houses recently have been repaired and underpinned.

STATESVILLE, N. C.—Abernethy Mills, Inc., has been chartered by the state to engage in the textile manufacturing business. Authorized capital stock $1,000,000, subscribed stock $100 by J. W. Abernethy of Newton, Frances Haitt of Winston-Salem, and Lura Rader of Hickory, N. C.

CLOVER, S. C.—American Thread Co. is planning to sell the 220 houses in the Clover mill villages to employees.

FORK SHOALS, S. C.—A two-year modernization program has transformed the Riegel Textile Corp. plant here into one of the most efficient cotton spinning plants in the South. The old L-shaped building is now a square, and has air changing machinery. Twenty-six new spinning frames have been added to the original 16, making a total of 11,592 spindles in operation. A new high-speed warper is in operation, capable of putting 900 yards of yarn a minute on large beams. Plans are also being made for improvements in the mill village.

KINGS MOUNTAIN, N. C.—Kings Mountain Narrow Fabrics, Inc., which produced electrical tape and other narrow fabrics, was sold recently at public auction in Charlotte, N. C., to Lambeth Rope Corp. of New Bedford, Mass., for $55,000. The plant has been closed since last Fall. The new owners plan to resume operations as soon as possible with an initial employment of about 100 persons.

PENDLETON, S. C.—A million-dollar expansion program has been launched at Mill No. 4 of Excelsior Mills here which is expected to approximately double the plant's worsted capacity. Included in the expansion move is construction of a new wing which will be about 300 feet long.

THOMSON, GA.—Daniel Construction Co. of Greenville, S. C., has been awarded the contract for construction of a new rayon weaving plant here for Deering, Milliken Co., Inc., to be known as Kingsley Mill. It will include about 90,000 square feet of floor space and will be of solid masonry construction. It is expected that about 500 looms will be operated in the new plant which will offer employment to about 200 persons.

NEWNAN, GA. — Coweta Mills is expected to be in operation next month in the production of rope, mop and chenille yarns. Coweta Mills was organized recently by L. O. Hutchinson, J. O. Hutchinson and W. J. Estes, following purchase of the former Brooks Spinning Mills.

FORT MILL, S. C.—Twelve Saco-Lowell double side combers and two lap winders are being installed in the local plant of Springs

3 TIMES THE WEAR

This Tough FIBRE INSERT Does It!

Designed especially for today's high speed operating conditions, patented Super-Stroke Picker Sticks last three times as long as ordinary sticks. Norris' shock resisting vulcanized fibre insert is bonded under heat and pressure and will never separate from the wood. This construction gives maximum resistance to splitting and warping.

NORRIS Super-Stroke PICKER STICKS

Available in styles and sizes for all looms. A trial order will convince you of Super-Stroke superiority.

NORRIS BROS.
GREENVILLE, S. C.

## MILL NEWS

Cotton Mills. Installation of the new equipment is expected to be completed by Sept. 1.

McColl, S. C.—Plymouth Mfg. Co. has initiated a $100,000 improvement program for homes owned by the company. The program calls for installation of complete bathrooms, and hot and cold water outlets in baths and kitchens.

Caroleen, N. C.—All of the spinning equipment in Henrietta (N. C.) Mills and Caroleen plant of Henrietta has been replaced with new Saco-Lowell spinning equipment.

Chattanooga, Tenn.—The new addition to the Du Pont nylon yarn plant was placed in operation late last month. The facility is to be used as a pilot plant to prove and test the new manufacturing process known as continuous polymerization.

Anniston, Ala.—Stickney Construction Co. of Gadsden, Ala., is constructing a $34,765 addition at Classe Ribbon Works here.

Chesnee, S. C.—Saco-Lowell Shops recently completed the replacement of combing and spinning equipment at Chesnee Mills.

Spartanburg, S. C.—An opinion announced last month by the Fourth Court of Appeals at Asheville, N. C., affirmed an earlier decision of the District Court at Spartanburg in thte case of Ellis Weaving Mills, Inc., versus the Citizens and Southern National Bank of Spartanburg. The case was a civil action by the plaintiff-appellant against the bank to recover $4,192.28 alleged to have been erroneously paid by the bank in honoring certain checks deposited to the plaintiff's credit.

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York, S. C.—Stockholders of Neely Cotton Mills, Inc., were scheduled to have met July 17 to consider and act upon a resolution of the board of directors recommending a dissolution of the corporation and liquidation of its affairs. The plant utilizes about 6,000 ring spindles, 2,920 twister spindles and 48 cards in the manufacture of carded yarns.

Clover, S. C.—A. K. Adams of Atlanta, Ga., has been awarded the contract for construction of a building at the Hampton Yarn Division of American Thread Co. here. Cost of the structure was not stated.

Rockmart, Ga. — Approximately 500 Goodyear mill-owned houses in Rockmart and Cedartown, Ga. are to be put up for sale immediately with employees of the two mills to be given the first opportunity to purchase the homes at reasonable prices, it has been announced by S. A. Steere, vice-president. Explaining the move Mr. Steere said: "The era of company-owned homes except in very small mill villages is now passing. Textile mill workers have achieved economic equality with workers in other lines of manufacturing where such housing practices were never followed or found necessary. Home ownership is one of the basic ideals and objectives of our American way of life."

Lexington, N. C.—Employees at the Lexington rayon plant, a unit of Burlington Mills, June 23 celebrated two important plant events. The plant has achieved a safety record of 3,000,000 man-hours worked without a disabling injury, and the new plant refrigeration system has been placed into use. The Liberty Mutual Insurance Co. presented a new safety flag and safety plaque to the plant for its outstanding safety record. The Lexington plant had its last lost-time injury on December 16, 1947 and had operated 911 consecutive days without a disabling injury when the safety goal of 3,000,000 man-hours was reached on June 15. Installation of the modern refrigeration system, believed to be one of the largest in tthe South, has been completed and is now in full use.

New York, N. Y.—Lowenstein & Sons, one of the nation's largest cotton fabric producers, has obtained an option to purchase 50,000 shares of the common stock of Powdrell & Alexander, Inc., drapery manufacturing concern. The option terminates Aug. 5. Powdrell & Alexander operates spinning, weaving and finishing plants at Danielson, Conn., and New Bedford, Mass., as well as sewing plants in other parts of the country.

Sylacauga, Ala.—Avondale Mills and its "partnership with people" program have produced a way of life that is hard to match elsewhere in America, according to H. G. Ogden in the July issue of *Liberty Magazine*. In an article entitled, "Where Labor and Management Work Together as a Team," Mr. Ogden tells the story of how the Comer family's policies have helped create communities where people work together for the benefit of all.

# For The Textile Industry's Use

## EQUIPMENT – SUPPLIES – LITERATURE

### Allen Co. Changes Name, Becomes Allen Beam Co.

R. Udell Thornton, owner of Allen Co., New Bedford, Mass., announces that this company has changed its name to Allen Beam Co. The change was effective July 1. At the same time, coincidental with completion of arrangements for transfer of ownership of the company, the following appointments became effective: Lewis C. Briggs, III, president; Benjamin C. Miller, treasurer; directors, Mr. Briggs, Mr. Miller and Charles K. Beals.

Mr. Briggs, a Harvard graduate, has for the past eight months been general manager of Allen Co. and received his textile training as a student engineer for three years under Howard Whitehead at Pepperell Mfg. Co., Biddeford, Me. Prior to his association with Allen Co. he was for seven years foreign sales manager for Saco-Lowell Shops. Mr. Miller has for many years been with Allen Co. as purchasing director and comptroller. Mr. Beals has been plant superintendent at Allen Co. since 1933.



"The new management," states Mr. Briggs, "contemplates no significant changes, and will continue the policies and operating methods which have built the Allen Co. to its preeminent position in the field of wooden warper and loom beams, adjustable beam heads and allied products. Sales efforts will be intensified, under the direction of James E. Oliver as sales manager, with the following representatives: Warren Johnson, New England; Carlton Oliver, North Carolina; Joseph Bowler, Jr., South Carolina and Georgia."

### New Brown Spindle Oiler Embodies Many Features

Brown Dynalube Co. of Charlotte, N. C. producer of the portable Brown battery-powered lubricator, announce the development of a battery-powered spindle oiling machine for the textile industry. The spindle oiler is said to be extremely practical and efficient and is adaptable to other textile machinery other than yarn preparatory units.

W. Y. Brown, the inventor, worked in close co-operation with Minor R. Adams, superintendent of Parkdale Mill, Gastonia, N. C., and other textile men to develop the spindle oiler. The job of oiling spindles by the use of hand oilcups has always been considered one of the most tiresome and unpleasant jobs in a textile plant. The new Brown Dynalube spindle oiler is said to change this to one of exceptional operator ease because he sits on a comfortable seat provided on the body top and propels himself with his feet, oiling spindles with only a slight pressure of his thumb on the hand control lever.

The spindle oiler is constructed of 12-gauge body steel, mounted on two eight-inch ball bearing semi-pneumatic rubber tires and two ball bearing swivel casters with neoprene tires. Height of the machine is 20 inches to the reservoir cap, length 24 inches, body width eight inches, hub-cap width, 14 inches. Standard length of the flexible hose is 26 inches but any length can be provided. The quick-acting hand control can be equipped with a variety of no-drip nozzles for servicing any type oiler fitting.



A six-volt automotive type battery supplies power to an electric pump that maintaines a constant, though adjustable oil pressure of three pounds per square inch or more, with a volume of one pint per minute or more of the heaviest spindle oil. The oil tank on the machine holds five gallons and the battery is said to need recharging only once a week with the plate-type rectifier that is included in the oiler. The battery charger operates from any 110-volt a.c. outlet, has its own drop cord, and will recharge the battery overnight. Further information on the battery-powered spindle oiler may be had by writing the Brown Dynalube Co., P. O. Box 86, Charlotte, N. C.

### Develop New Kettle For Lab Or Small Batch Use

A new versatile kettle for laboratory or small batch use has been announced by the Chaffee Design & Mfg. Co., East Aurora, N. Y., manufacturer of special machinery and equipment. This new kettle is completely self-contained in an all steel table frame with built-in motors to drive scraper-agitator and pump for re-circulating or removing contents. The elements of the batch are loaded into the thickly insulated kettle through a half cover which is held down by thumb screws when closed during the batch run. Thermostatically controlled gas heat operates up to 400-500°F. temperatures. The scraper-agitator in the kettle is driven and controlled by a variable speed motor.

Under the table top is a pump that removes the contents from the bottom of one kettle through a flush valve at temperatures up to 500°F. The pump discharges the batch into a manifold and then to open pans for slow cooling, or recirculates the batch back to the top of the kettle, or through a strainer for cleaning or "grease working," or through a relief valve, or to other extra equipment such as a flaker. Such a wide choice of batch handling meets the unusual flexibility required in laboratory work.

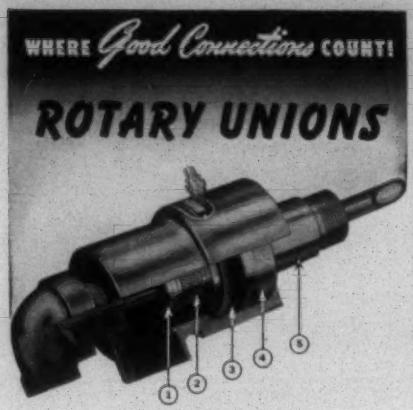
Ample space is provided on top of the table for additional laboratory cooling equipment or other similar equipment that may be required for special handling of batches. Experimental runs in this kettle eliminate the possible wasting of large quantities of material and tying up large production facilities, the company claims. For complete information write Chaffee Design & Mfg. Co., East Aurora, N. Y.

### Two Chrome Colors Added To Hilton-Davis Line

Two new chrome colors of special interest to woolen and worsted manufacturers have been added to the textile dyestuffs line of the Hilton-Davis Chemical Co. Division of Sterling Drug, Inc., Cincinnati, O. They are being marketed as Hidachrome Orange G Concentrated (Color Index Number 40) and Hidachrome Yellow 2-G Concentrated (Color Index Number 36)

### Glasco Dyehouse Truck Contains Safety Feature

An interesting feature of a new stainless steel dyehouse truck is a convex floor that drains the drip to the sides, where openings allow it to fall into a gutter inside the walls of the truck, according to Glasco Equipment Co., Wait Street, Paterson, N. J. From this gutter the drip is carried to a central point under the truck where it is discharged well inside the perimeter of the bottom of the truck. The result is that drip does not fall on the feet of the truck operator. Wet feet from drip is a frequent cause of discomfort and an occupational risk, because it creates an unsanitary condition. To avoid this drippage workers stand clear of ordin-




ROTARY UNIONS are precision made to prevent leakage of gasses, liquids, or pressure wherever revolving shafts or drums must be heated or cooled.

ROTARY UNIONS are simple to install . . . require no complicated piping and brackets. They require practically no maintenance service. ROTARY UNIONS are so designed that stresses or strains cannot cause wear on vital parts. They far outlast and outperform stuffing boxes, packing joints and ordinary connections. Low friction drag permits continuous high speeds with very low power consumption.

**1—Silver brazed construction**
**2—Bellows of heavy Monel**
**3—Graphite positive sealing**
**4—Ball bearing radial thrust**
**5—Shaft of special steel**




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*FOR THE TEXTILE INDUSTRY'S USE—*

ary trucks and throw goods into the truck, which often results in soiling or other damage to the fabrics. This fault has now been recognized for the first time in dyehouse truck design.

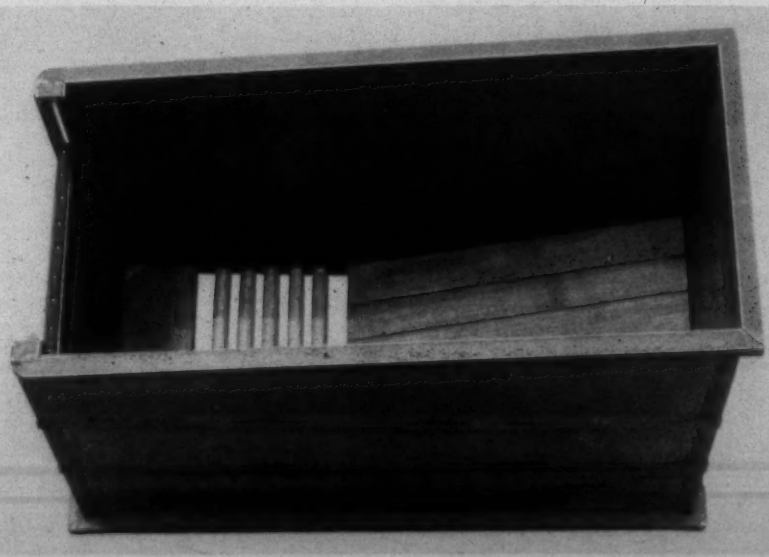
## New Bradley Washfountains Now Have Metal Pedestals

Bradley Washfountain Co., Milwaukee, Wis., announces that all Bradley precast marble and stone washfountains now are available with metal pedestals. Because of their lighter weight the new pedestals afford an appreciable saving in freight costs and also are much easier to handle on the job. Convenience of installation and later maintenance are enhanced by the fact that the panels of the pedestals are easily removable, thus providing ready access to mechanism within. In addition, metal pedestals give the fountains a new streamlined, handsome appearance and because they are entirely demountable make it possible to pack and ship a complete washfountain in a single crate.

## Sunray Lists Advantages Of New Safety Roving Truck

Sunray Co. of Spartanburg, S. C., is calling the attention of the industry to its new Safety Roving Truck which is designed and built with an inclinable slatted or roller type bottom, thus causing the contents to automatically gravitate toward the operator's end, as well as automatically freeing itself of any trash through the slatted or roller type bottom (*see illustration below*).

The truck is also equipped with a depressible end section at the operator's end which the company states keeps the operator from having to strain over a high end section in order to reach the contents on the bottom of the truck. This end section depresses easily when the weight of the operator depresses against it, but also automatically resumes its original position as the operator's body weight is released. Patent is pending on this new truck and Sunray Co. is the only licensed manufacturer.



## Chemical Items Described In New Columbia Booklet

*Products of Columbia*, a new 26-page booklet, containing a clear, crisp, concise outline of the wide range of chemical products for industry offered by the Columbia Chemical Division of the Pittsburgh Plate Glass Co., is now available. Thumb indexed, the new booklet is an extensive revision of an earlier piece issued under the same title. New products have been incorporated, as well as a brief description of the nature and characteristics of all Columbia products. Included are typical uses of the various Columbia chemicals and a listing of the types of containers employed in the distribution of each. Copies may be had upon request to the Pittsburgh Plate Glass Co., Columbia Chemical Division, Fifth Avenue at Bellefield, Pittsburgh 13, Pa.

## New Industrial Catalog Issued By Formica Co.

The Formica Co., Cincinnati producer of laminated plastics, is releasing its new 16-page catalog on materials for industrial use. The catalog covers applications for electronic, textile, automotive, aviation and chemical industries. A special feature is the 1950 comparator chart, indicating significant properties for each of more than 50 standard grades. A section is also devoted to Pregwood, Formica's impregnated and densified wood product. Copies of the new catalog may be had upon request to Robert T. MacAllister, The Formica Co., 4613 Spring Grove Ave., Cincinnati 32, Ohio.

## Catalog On Phillips Rotary Pressure Joints

Of interest to the industry is a new catalog available from the Phillips Rotary Joint & Valve Co., Inc., Hoboken, N. J., describing the Phillips precision-made flexible rotary pressure joints. These units are said to be particularly efficient at high and low pressures and temperatures in transferring steam and all liquids, hot or cold, into and out of any machine or revolving drums or rollers. The firm states the new rotary

joints reduce operating costs to an amazingly new low and increase operating efficiency by eliminating almost all maintenance. The swivel motion of the Phillips joint, the firm states, has eliminated all danger of rapid wear and maintenance costs by compensating for any misalignment by providing an angular movement in its construction. Equally important, it is pointed out, is valuable production time saved by unnecessary machinery shutdowns. Being leak-proof it protects the operator by eliminating any possibility of scalding or other burns while the liquid or steam being transferred is in a "hot" stage.

## New Pump For Convenient, Safe Transfer Of Acids

Safe and convenient transfer of acids and other liquids from stainless steel containers is now possible with the GS No. 17 pump, according to the manufacturer, General Scientific Equipment Co., 2700 West Huntingdon Street, Philadelphia, Pa. Liquids flow smoothly and stop instantly, it is claimed, coming in contact only with the corrosion-resistant tube.



The GS No. 17 pump is fitted with a safety valve for air line pressure and a hold down clamp to secure the pump into the container, together with 25 feet 3/8 inch air hose with male or female coupling and chuck attached. Lead tubes are suitable for sulphuric, hydrochloric, hydrofluoric acids and many others. Saran plastic tubes are recommended where the pump is to be used in nitric, muriatic, citric, phosphoric, acetic, bleaches, peroxide and others. These safe pumps are essential wherever acids and corrosive liquids are handled. . . in industry or laboratory. Nationally known chemical manufacturers as well as many specialty establishments find them an inexpensive must for safety.

## Monobed Deionization Is Detailed In New Booklet

A new 12-page illustrated booklet on "Amberlite Monobed Deionization" offers a miniature textbook in readable form on the history, behavior, present performance and potential uses of the Monobed ion exchange systems in the water-conditioning, chemical process and other industries. Reactions of the various combinations of exchangers are explained in text and equations. The 8-½ x 11-inch booklet discusses operating costs, equipment costs, quality of product derived, rinse requirements and other properties as they apply to the complete or partial single-step removal of ionized solids from solution. A three-page section is devoted to design and operation of Monobed equipment, and more than 80 fields of possible applications are listed. A final table shows helpfully the nomenclature, chemical behavior and typical uses of the six systems thus far developed and evaluated. The booklet is available on request to the Resinous Products Division, Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

## Items For Textile Industry Listed In Fafnir Catalog

Fafnir Bearing Co., New Britain, Conn., has made available to the industry its new catalog listing many of the special ball bearing units developed by the company for the textile industry. The catalog is arranged to show bearing units used in each of the various phases of the textile industry in operation—opening, carding, spinning and twisting, finishing, weaving, synthetic fiber processing, etc. Dimensions and unit numbers are shown for ease in specifying and ordering.

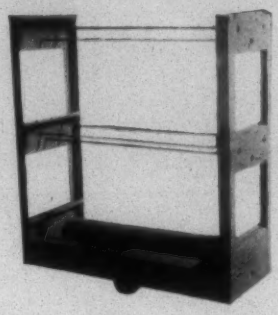
## Baxter Making Jacquard Cards At New S. C. Plant

A modern plant for the manufacture of Jacquard cards for use in the fine upholstery, drapery and woven goods trade has been established in Cherokee County, South



**WESTINGHOUSE TO BUILD NEW SOUTHERN PLANT—Sketched above is the new building which will be operated by the Westinghouse Electric Corp. manufacturing and repair department at Birmingham, Ala. It will provide extensive overhaul and repair facilities to serve customers in all parts of Alabama.**


**Gets Around *Gracefully***



**Excel No. 1400 Comber Lap Truck**

**The No. 1400 is streamlined to carry 9 to 12 Comber Laps with a minimum of effort.**

**Construction:**

- **Heavy duty black iron**
- **Securely welded throughout**
- **⅝ inch cold rolled rods provide ample strength to carry heavy loads**

**Finish**

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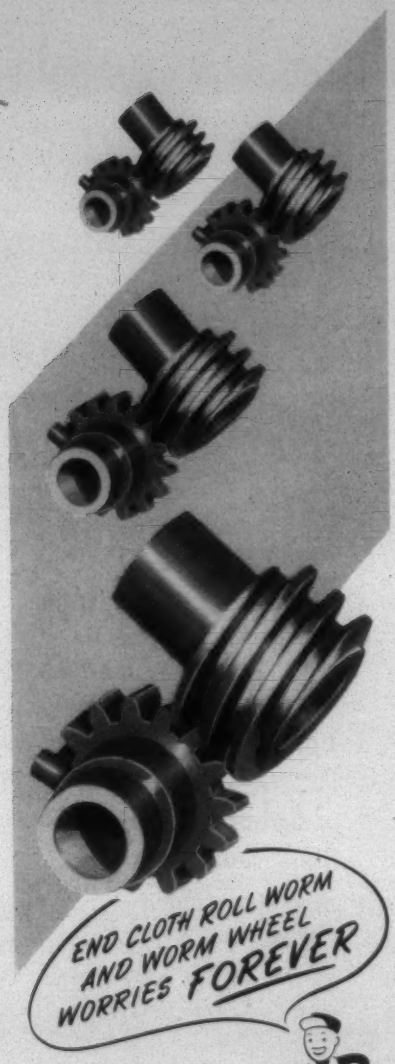
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*FOR THE TEXTILE INDUSTRY'S USE—*

Carolina, by the Baxter Paper Corp. of New York. Mailing address of the new plant is nearby Grover, N. C. Irving S. Baxter, president, states that the South Carolina plant should serve as an attraction for any Jacquard weaving manufacturer contemplating building in the South "because the average Jacquard weaving mill requires close contact and prompt service for the supply of Jacquard cards." The new plant employs about 40 persons.

## Bulletin Lists Features Of New De Laval Pump

Currently available to the industry from De Laval Steam Turbine Co. is the firm's bulletin No. L313A-B describing the new De Laval A313A IMO rotary pump. The new pump is a general service screw-type rotary pump designed for pumping petroleum products, and other light or viscous fluids as required for rotary and steam atomizing oil burners, oil transfer, lubrication, hydraulic systems and similar services. Capacities of 85 gpm. . . pressures to 150 psi. The bulletin contains a cross-section drawing, description of the I.M.O. pumping principle, viscosity tables, dimension drawings and table of standard N.E.M.A. motor frame sizes. Main features of the pump include: (1) Pulsation free flow. (2) Pump can be mounted in any position and driven by direct connected shaft, V-belt or chain. (3) Mechanical shaft seals. (4) Prelubricated bearings. (5) Optional types of mountings. For further information write Advertising Department, De Laval Steam Turbine Co., Trenton 2, N. J.

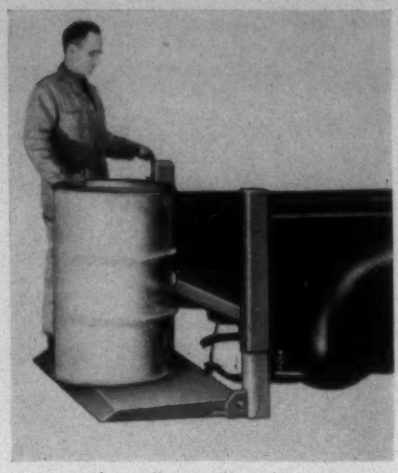
## All Atwood Departments Now At Cranston, R. I.

This month the repair parts department of the Universal Winding Co. Atwood Division was moved to the company's main office in Cranston, R. I. All Atwood Division offices now are located at the main office. Correspondence should be addressed to P. O. Box 1605, Providence, R. I.

## Hydraulic Tailgate Loader Offered For Pickup Trucks

A hydraulically-powered tailgate loader for pickup trucks, called the Lift-O-Matic, has been developed by the National Lift Co., Waukesha, Wis., subsidiary of Gar Wood Industries, Inc., Wayne, Mich. The Lift-O-Matic can easily be installed on most pickup trucks. Its lifting capacity is 1,000 pounds. The hydraulic power is provided by a fan-belt driven hydraulic pump with its own self-contained clutch. The pump operates only when lifting power is needed. One handy control, installed on the Lift-O-Matic, is used for either raising, holding or lowering the tailgate. The operator can operate the unit while riding up or down with the load.

The Lift-O-Matic is all steel and sturdily constructed. When it is not being used to load or unload the truck, it can be level-locked at the truck body floor level, or it can be swung up and securly locked, acting



as a regular tailgate, the company states. A safety by-pass valve in the hydraulic pump prevents overloading and endangering the hydraulic system. The new device speeds up loading and unloading pickup trucks—enables one man to handle all the loading and delivering. It helps prevent damage to heavy merchandise that presents difficult loading and unloading problems even with two or more men on the job. It increases the efficiency of drivers by eliminating the tough, back-breaking duties, the company states, and increases sales by allowing a higher caliber driver to make more pick-ups and deliveries. Prices and additional information are available by writing National Lift Co., Dept. 2132, 225 Madison Street, Waukesha, Wis.

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## Du Pont Experimenting With Fiber V

The Du Pont Co. is evaluating a new synthetic textile fiber on an experimental scale. Limited quantities of window curtains, blouses, sport shirts, sewing thread, and Summer suitings made from this new product, known tentatively as Fiber V, are currently being tested to determine the commercial possibilities of the new fiber in consumer products. In the industrial field, evaluation is also being made in fire hose, V-belts and other applications.

Technically, the material is a condensation polymer obtained from ethylene glycol and terephthalic acid. It is not chemically related to nylon. Quantities of both continuous filament yarn and staple required for development work are being made in an experimental operation at the Seaford, Del., plant of the nylon division.

Like nylon and Orlon acrylic fiber, Fiber V appears to offer many properties which the company said are potentially outstanding contributions to the textile industry. It has high tensile strength and high resistance to stretching—both wet and dry. It has good resistance to degradation by chemical bleaches and to abrasion. Most of the fiber's properties are equally good under wet or dry conditions. Fabrics made from Fiber V have excellent resilience and resistance to wrinkling, launder easily, dry quickly, and can be heat set. A wide range of filament deniers is possible. The fiber has good electrical insulation properties and is not weakened by fungus, mold or mildew.

The fiber first was developed in England where it bears the trade-mark Terylene. United States rights to manufacture the patented fiber were acquired by the Du Pont Co. in 1946. Extensive development work by Du Pont, since this acquisition, has been on a purely experimental basis and no decision has yet been made to produce the fiber commercially.

## Patent Granted On Warp Dye Beam

Among recent patents granted to Carolinians, according to Paul B. Eaton, is Patent No. 2,505,498, issued to Homer V. Lang of Charlotte, N. C. for a warp dye beam. This invention provides a warp dyeing beam for dyeing warp yarns having a perforated cylinder and head members with the head members having cast integral therewith annular rim portions projecting toward each other and over which the ends of the perforated cylinder are adapted to fit. Supporting members are provided for strengthening and supporting the rims and these rims are grooved peripherally down to the supporting members to thus allow a free flow of the treating fluid through the rims and through the perforations in the ends of the cylinders.

## Calco Advertising Gets Top Award

The ad series "Calco Dyelines," running currently in trade publications to the textile industries, recently received the Premier Award for Business Paper Campaign, Product Advertising in Industrial Publications. The entry was submitted by Calco's agency, Hazard Advertising Co., in the annual creative awards competition of the National Advertising Agency Network. The award was presented at the 19th annual conference of this association, held at the Seigniory Club, Montebello, Que.

Receipt of the award indicated advertising of real merit,


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since there were over 275 entries by concerns of national prominence. The panel of judges selected to judge this year's entries were outstanding authorities in the fields of advertising, market research and sales promotion. "Calco Dyelines" was adopted two years ago by Calco after careful study of sales problems, markets and products sold by the company to the market. After the series had appeared eight months, an opinion survey was conducted by the advertising department. Questionnaires were mailed to the entire textile industry comprising a mailing list of about 3,500 names. The returns amounted to 37 per cent, which is high and indicated that the service was proving very effective as a medium for promoting the sale of Calco dyestuffs.

"Receiving the number one award in this national contest of more than 275 entries," E. K. Hunt, Calco advertising manager, stated, "confirms the effectiveness of the approach adopted for this ad series."

## Spinning Frame Patents Are Granted

Among recent patents granted in the textile field, according to Paul B. Eaton, are the following:

Patent No. 2,496,464 has been issued to Fred G. Parott and Clarence M. Gentry, both of Gastonia, N. C., relating to a tape cylinder mounting. The object of this invention is to provide means whereby any one of the longitudinally extending cylinders of a spinning frame may be removed independently of the other cylinders and whereby the bearing blocks disposed between the proximate ends of any two of the cylinders may be removed or replaced as desired without the necessity of removing the associated cylinders from the machine.

Patent No. 2,499,075 has been issued to Elvin B. Robinson of Gastonia, N. C., and Jack C. Costner of Bessemer City, assignors of one third to Arnold W. Kincaid of Kings Mountain, N. C. This invention relates to a spindle and bolster and lubrication means therefor, and calls for an improved spindle and bolster whereby automatic lubrication and circulation of the lubricant therein will be provided in which the weight will be taken off the lower tip of the spindle which heretofore has usually rested on a bearing. Heretofore, due to the rapid rotation of the spindle and lack of lubrication, the lower end of the spindle has usually worn out very rapidly, thus requiring frequent replacement and this invention overcomes this fault.

E. I. du Pont de Nemours & Co., Inc., was owned by 118,732 stockholders as of June 30, 1950.

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## Rayon Shipments Maintain High Rate

Shipments of rayon yarn and staple to domestic consumers on a preliminary basis totaled 103,100,000 pounds in June, a one per cent increase over May and three per cent below the record March, 1950, figure, according to *Rayon Organon*, statistical bulletin of the Textile Economics Bureau, Inc. This figure was attained despite a strike at one producing plant. Shipments in the first half of 1950 at 601,500,000 pounds exceeded those of the corresponding period in 1949 by 46 per cent. If shipments continue at a similar rate for the balance of the year, they will exceed the peak year of 1948 by more than 11 per cent.

Rayon filament yarn shipments in June aggregating 78,400,000 pounds were two per cent above the previous month. Viscose+cupra textile yarn shipments totaled 27,000,000 pounds, a gain of six per cent over May; viscose high-tenacity yarn, 24,600,000 pounds, up one-half per cent; and acetate yarn, 26,800,000 pounds, unchanged from May.

Shipments of rayon staple plus tow in June totaled 24,700,000 pounds, a decline of three per cent from the May level. Rayon staple shipments were made up of 15,300,000 pounds of viscose and 9,400,000 pounds of acetate fiber. In the first six months of the year, staple shipments totaling 145,500,000 pounds showed an increase of 123 per cent over the corresponding period of 1949.

Rayon stocks in the hands of producers at the end of June amounted to 20,000,000 pounds, which compares with 21,100,000 pounds held at the end of May. End-of-June stocks were made up of 8,800,000 pounds of viscose+cupra yarn, 5,200,000 pounds of acetate yarn, and 6,000,000 pounds of rayon staple plus tow.

A tally by the *Organon* of rayon staple imports during the month of May reveals that a record-breaking 7,973,000 pounds were shipped here. This brings the five-month imports to 28,669,000 pounds, a peak figure for the period. Five months' imports in 1950 compare with 15,783,000 pounds in the corresponding period of 1948 and 6,756,000 pounds in the first five months of 1949. The principal countries supplying staple to date in 1950 in order of their importance were France, the United Kingdom, Belgium, Norway, Switzerland, and the Netherlands. Other substantial suppliers included Austria, Cuba, Germany, Japan, Norway and Sweden, the *Organon* points out. Imports of rayon filament yarn into the United States continue nominal. During May they totaled only 89,000 pounds and for the first five months of 1950, the total was 320,000 pounds.

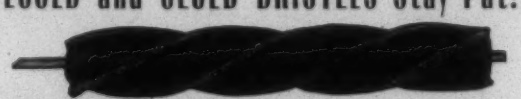
An analysis by the *Organon* of rayon and related broad


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woven fabric production in the first quarter of 1950 indicates that, out of a total record-breaking 640,981,000 linear yards produced in the quarter, 593,731,000 yards were rayon and the balance was nylon, silk, glass, and other types of fabrics. Aside from the rayon increase which was sizable, the next most important growth was in all-nylon and part-nylon fabrics. According to Bureau of Census reports, nylon consumption by the broad woven industry totaled 4,715,000 pounds in the first quarter, which would mean an annual rate of about 19,000,000 pounds. Cloth of 100 per cent nylon produced in the period amounted to 26,330,000 linear yards, which compares with 27,601,000 yards in the fourth quarter of 1949 and 14,320,000 yards in the first quarter of 1949. Production of silk in the quarter was 5,136,000 yards as against 4,024,000 yards in the fourth quarter of 1949 and 4,853,000 yards in the first quarter of 1949.

Of a total of 96,000,000 pounds of tire cord and fabric produced in the first quarter, 73,000,000 pounds or 76 per cent was rayon and nylon cord and fabric. This compares with a total of 113,000,000 pounds in the first quarter of 1949 when 69,000,000 pounds or 61 per cent was rayon and nylon. According to market reports, the consumption of rayon in the manufacture of tires is limited only by the supply available from producers, the *Organon* points out.

## Complete Cotton Mechanization In Offing

Attainment of a major goal in the history of cotton's progress—fully mechanized production, processing, and handling of cotton, thus lowering its cost and gaining for it a greater competitive advantage—loomed nearer to several hundred delegates attending the fourth annual Beltwide Cotton Mechanization Conference.

The group, meeting at Greenville and Stoneville, Miss., July 13-15, saw machines rumble into the cotton field at the Delta Branch Experiment Station—high-speed land preparation and cultivating equipment, sprayers for insecticides and defoliants, and other apparatus—to accomplish in a few minutes operations that a few years ago required many hours of labor. Available for inspection also were latest models of all mechanical cotton pickers in commercial production.

In tours of the Delta Branch Station, U. S. Fiber Laboratory, U. S. Cotton Ginning Laboratory, the Delta farming area, and plantation farm shop, delegates gained a new insight into how research and its applications are solving such problems as growing and processing fiber better adapted to the needs of cotton's customers.

Economists on the three-day program emphasized the necessity for mechanization if the American cotton industry is to be continued on a profitable basis. They detailed, too, the rapid progress in the past ten years in adaptation of

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machines to cotton farming, and held out hope for even more accelerated advancement in the future, as better equipment is developed, financing difficulties are solved, and findings of researchers become a practical reality.

Visualizing a more prosperous economy as the Cotton Belt grasps its opportunities, representatives of the petroleum, fertilizer, and chemical industries, and of banking and credit, re-affirmed their faith in cotton. They took part in the panel, "Our Stake in Cotton's Future."

How weeds and grass in cotton are being controlled both with machines and by use of chemicals, how insecticides and defoliants now are being applied to cotton more effectively and economically, and how modern gins are keeping pace with mechanized production, was brought out on another panel—"Mechanization and Associated Technologies."

The cotton industry is facing cotton's future realistically, a Delta cotton planter told conferees on the final day of the program. This point was emphasized further in the panel, "What to Do About It." Panel speakers told how all agencies are joining in the effort to bring more economy and efficiency into every phase of the cotton cycle. Included in the final discussion were representatives of U.S.D.A. bureaus, experiment stations and extension services, the farm equipment industry, and cotton manufacturers.

The conference was sponsored by the National Cotton Council. Co-operating were land grant colleges, the Farm Equipment Institute, U. S. Department of Agriculture, vocational agriculture, and farm organizations. Hosts were Mississippi State College, Delta Council, cotton and allied industry organizations.

## Many Visit Memphis Cotton Testing Lab

During a recent three-month period over 150 individuals visited the Memphis, Tenn., cotton testing laboratory of the United States Testing Co., Inc., according to an announcement from the firm. Techniques and equipment used in conducting strength, length uniformity, fineness and maturity tests on cotton were observed by the visitors, and each expressed a keen interest.

While most of the visitors were from the Memphis area or from Southern cotton mills, there were visitors from 15 cotton states and six foreign countries.

Cotton men were particularly interested in viewing cotton fibers of various growths under the microscope to study surface characteristics of the fibers.

It is estimated that there have been over 300 visitors to the Memphis laboratory since it was established last September.


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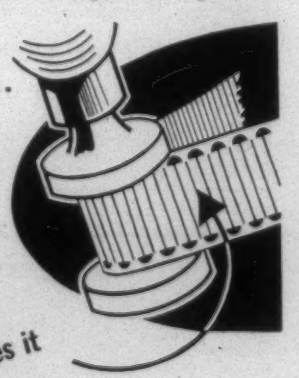
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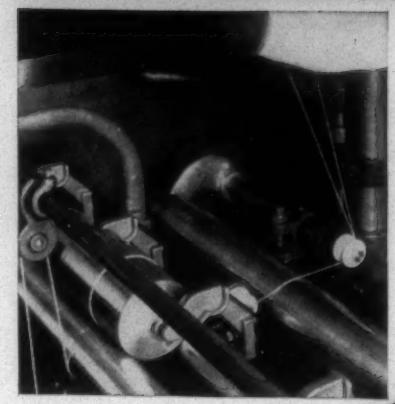
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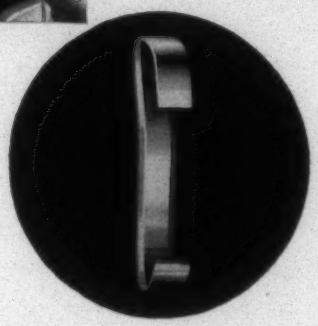
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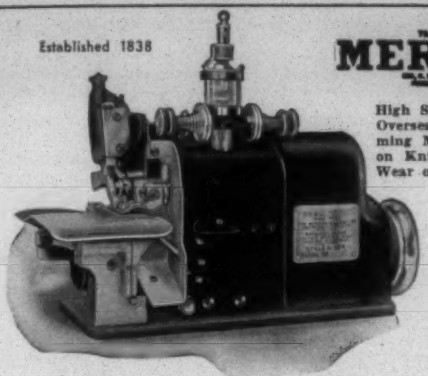
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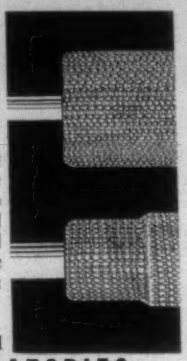
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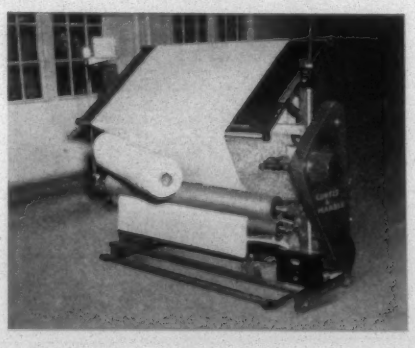
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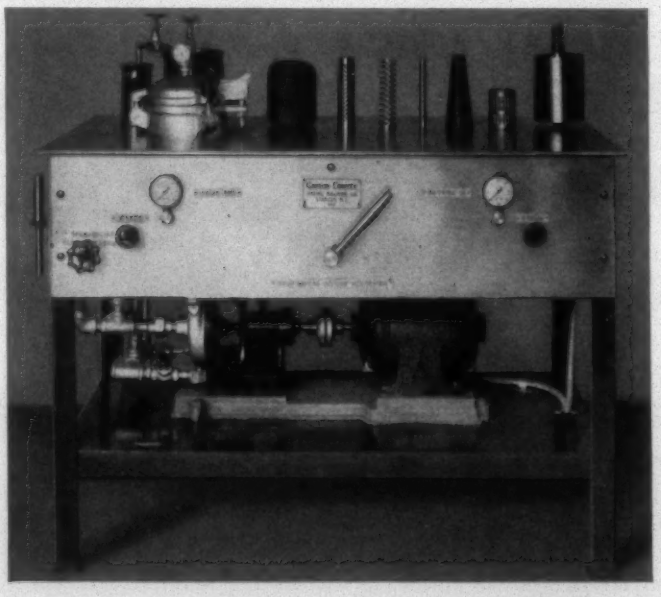
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# Before Closing Down

– TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED –

## PERSONALS



P. W. Coleman of Greenville, S. C., has been appointed sales representative in South Carolina for Oliver D. Landis, Inc., of Charlotte, N. C. Mr. Coleman, a graduate of Clemson College in textile engineering, was on the sales staff of Veeder-Root Co. for 11 years, representing that company in the Carolinas and Virginia, and is well known among textile manufacturers of this section. He will continue to make Greenville his headquarters. Among the firms which Oliver D. Landis, Inc., represents in the South are: Keller Tool Co., Benjamin Booth Co., Alexander Bros., Westport Fibre Co., and Arthur S. Brown Co.

Frank Clark has returned to Borden Mills, Inc., Kingsport, Tenn., as superintendent of the warp preparation and spooling departments.

Frank Stubbings, who formerly managed the Sterling, Conn., installation of U. S. Finishing Co., has been named manager of the Dublin, Va., dyeing and finishing plant of Burlington Mills Corp. . . . Beevley Keeber, superintendent of the Dublin plant, has been transferred to Greensboro, N. C., on special assignment to Bur-Mil's dyeing and finishing division.

E. B. Wheeler of Charlotte, N. C., has been appointed sales representative in the Southern territory for Textile Machinery, Inc., of South Portland, Me.

Cason J. Callaway, Jr., has been transferred from the New York office of Callaway Mills, Inc., to the home office at LaGrange, Ga., as assistant to the general manager of the HDV Division. Later he in turn will become assistant to the general manager of the MMC Division and the USEO Division.

J. W. Stewart of Westwood, Mass., has been appointed field research supervisor for textile chemicals for the Merrimac Division of Monsanto Chemical Co. Mr. Stewart will head a new research unit which will be responsible for translating laboratory results to the mill level in developing chemical answers to textile mill problems. Mr. Stewart joined Monsanto in 1947 and formerly worked in the firm's textile chemical sales department.

V. O. Roberson, Jr., has been appointed general manager of the fabric production division of United Merchants & Manufacturers, Inc., succeeding E. G. Speir, resigned. Mr. Roberson, who joined the firm in 1943, has had general supervision of the Ashland Corp. at Jewett City, Conn., as well as Seminole Mills at Statesville, N. C., both units of U. M. & M.

John A. Quenelle, overseer of spinning at the Catherine Plant of Avondale Mills, Sylacauga, Ala., has been elected president of the Sylacauga Junior Chamber of Commerce.

R. M. Pulley, formerly general overseer at the Clover, S. C., plant of American Thread Co., has been promoted to assistant superintendent. He joined American Thread two years ago after service with China Grove (N. C.) Cotton Mills, Burlington Mills Corp. at Kings Mountain, N. C., and Bowling Green (S. C.) Spinning Co.

William Fraser, treasurer of J. P. Stevens & Co., Inc., since its incorporation in 1923, and who has been with the firm since the founding of the original partnership in 1899, retired this month but will continue as a director. . . . Kenneth W. Fraser, who joined Stevens in 1937 and has served as comptroller since 1946, has been appointed to the newly-created office of financial vice-president, in which capacity he will become senior financial officer. . . . A. J. Smith, with the firm since 1930 and formerly assistant treasurer, was named treasurer. T. B. Jackson, with the Industrial Cotton Mills division at Rock Hill, S. C., since 1921, was named assistant secretary. . . . Robert E. Henry, whose retirement as vice-president was announced in a previous issue of this magazine, was honored July 11 at a dinner party given in his honor at Greenville, S. C., by John P. and Robert T. Stevens.



Frank J. Swords, who formerly covered the deep South with headquarters in Atlanta, Ga., has been promoted to Southern district manager for Veeder-Root, Inc., with headquarters at the firm's Greenville, S. C., office at 231 West Washington Street. Mr. Swords will be in charge of both the sales and service operations for the entire South. . . . Harry S. Mansfield has been transferred from the service department to replace Mr. Swords in the deep South territory. He will work out of the Greenville office.

Dr. L. P. Seyb, since 1942 a chemist and group leader in the research department of Diamond Alkali Co., has been named manager of research for the company. Dr. Seyb succeeds J. E. Underwood, who relinquishes the post he has held for the past six years to become a research consultant for the company.

James D. Dean, head of the cotton chemical processing division of the Southern Regional Research Laboratory, New Orleans, La., has been invited to participate in the Gordon Research Conferences on the Microbiological Deterioration of Organic Substances to be held in New Hampton, N. H., the first week in August. Mr. Dean will present new fundamental information on the deterioration of cotton textile materials in outdoor use.

## OBITUARIES

**Julius Arthur Asbelle,** 71, who before his retirement had been superintendent of Harmony Grove Mills for 21 years, died recently at Commerce, Ga., following a long illness.

**Alexander Currie Holt,** 75, retired official of Cone Mills Corp., Greensboro, N. C., died July 14 in Greensboro. Mr. Holt was connected with the Cone textile interests for 41 years and was treasurer of Proximity Mfg. Co. in Greensboro, a Cone unit, when he retired in 1945. Two sons and a daughter survive.

**James L. Hurst,** paymaster at the Birmingham, Ala., plant of Avondale Mills since 1941, died late last month after several weeks of illness. He is survived by his mother, two brothers and two sisters.

**Charles Edwin Menefee,** 57, who was vice-president and general manager of Mansfield Mills, Inc. (now Caledonia Mills, Inc.) at Lumberton, N. C., died July 12 at his home in Mount Pleasant, S. C. Mr. Menefee, who joined Mansfield Mills in 1948, previously was associated for many years with Collins & Aikman Co. and with Iselin-Jefferson Co. as Southern representative. His wife, a daughter, two sons and a brother survive.

**James William Parris,** 73, master mechanic at the Trion, Ga., plant of Riegel Textile Corp. until his retirement in 1943, died July 8. He was associated with the company 37 years. Survivors include his widow, three daughters, two sons and a sister.

## MILL NEWS

WHITNEY, S. C.—Naumkeag Steam Cotton Co. of Salem, Mass., has purchased the former Whitney Mill property here from the Crescent Corp., which has used this property during the last several years as its Southern headquarters. The facility will be improved by the new owners for use as a branch plant location and work is scheduled to start soon on the transfer to Whitney of about 600 looms and 30,000 spindles, currently idle, representing one-sixth of the capacity of Naumeg's Pequot Mills at Salem. In addition to the transfer of looms and spindles plus complementary equipment, fabric bleaching, finishing and sheet manu-

facturing machinery likewise will be installed at Whitney. Once put into operation, the plant is expected to provide employment for about 400 persons with a weekly payroll of about $16,000. The Crescent Corp., textile machinery firm, has purchased 20 acres on the new Union highway in Whitney for a new Southern headquarters plant.

KINGSPORT, TENN.—Employees of Borden Mills, Inc., recently were awarded an accident prevention flag by Liberty Mutual Insurance Co. in recognition of having worked 1,000,000 man-hours without a lost-time accident.

OLD FORT, N. C.—Bids were to have been received July 20 for construction of an addition to the plant here of Clearwater Finishing Co. The local plant is a branch of Clearwater (S. C.) Finishing Co., a subsidiary of United Merchants & Manufacturers, Inc.

CAMDEN, S. C.—The first commercially-produced Orlon was turned out at the May Plant of E. I. du Pont de Nemours & Co., Inc., here July 1.

GUNTERSVILLE, ALA.—Improvements being made at Lakeside Cotton Mills in Guntersville by Hesslein and Co., Inc., owner of the plant, will cost between $200,000 and $250,000, according to Sydney P. Munroe, assistant to the president. About 295 men and women are employed at the mill. This number may be increased after changes now underway are completed, Mr. Munroe said. Before the present renovation and improvement program started there were not enough spinning frames to warrant operating the looms three full shifts. Twelve new spinning frames have been installed which may justify three regular shifts for the weave room, Mr. Munroe stated. Improvements have been made on all the old spinning frames. Other improvements now underway or completed include: A new humidification system is being installed which will insure the proper amount of moisture in the air for the best production of cloth. The system will serve both floors of the plant. All machinery in the opening and picking rooms was replaced with new machinery in July. A system which will blow lint and dust from the spinning frames has been bought for the spinning room. Until now, lint and dust have been brushed off by hand. The plant's two slashers are being renovated. Automatic controls which will insure uniform slashing, drying, speed and temperature are being added. Looms with worn parts are being replaced. New scales and a new baling press have been bought for the cloth room and a machine for shearing is on order. Another new purchase is a rolling-up head which will enable the mill to ship cloth in rolls to buyers who want it that way. Previously the entire output has been shipped in bales. The homes in the mill village are being improved, porches repaired, and paint furnished to employees who want to paint their homes. The mill offices have been moved into the recently constructed brick veneer building in front of the plant.

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